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Estimating the organizational cost of sexual assault in the U.S. military

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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

ESTIMATING THE ORGANIZATIONAL COST OF SEXUAL ASSAULT IN THE U.S. MILITARY

By: Dianna L. Bo
December 2013

Advisors: Nick Dew
Kathryn Aten

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**ESTIMATING THE ORGANIZATIONAL COST OF SEXUAL ASSAULT IN
THE U.S. MILITARY**

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Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
December 2013**

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ESTIMATING THE ORGANIZATIONAL COST OF SEXUAL ASSAULT IN THE U.S. MILITARY

ABSTRACT

This research estimates the organizational costs of sexual-assault incidents involving active-duty members of the U.S. military in FY 2012. The study builds on previous work by Robert H. Faley, in which he and his colleagues presented a model for estimating the organizational annual cost of sexual harassment. In this study, I develop a comprehensive framework of all organizational costs related to sexual assaults in the military workplace. Using behavioral-costing methodology, I quantify organizational cost estimates for twenty-four cost components, some of which were ignored by previous studies. The goal of this research was to arm leadership and decision makers with critical information about the organizational costs of sexual assault, to use in the battle to eradicate sexual assault from the U.S. armed forces.

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LIST OF ACRONYMS AND ABBREVIATIONS

CDC	Centers for Disease Control and Prevention
CID	Criminal Investigative Command
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DLA	dislocation allowance
FY	fiscal year
GAO	U.S. Government Accountability Office
GS	general schedule
IPV	intimate-partner violence
JAG	judge advocate general
MBA	master of business administration
MCIO	military criminal investigative organization
ME	margin of error
NA	not applicable
NR	not reportable
OMB	Office of Management and Budget
PTSD	post-traumatic stress disorder
SAPR	sexual assault prevention and response
SAPRO	Sexual Assault Prevention and Response Office
SARC	sexual assault response coordinator
SH	sexual harassment
SWO	surface-warfare officer
TDY	temporary duty
USCG	United States Coast Guard
USNA	United States Naval Academy
VA	victim advocate
VPRS	victim reporting preference statement
WGRA	Department of Defense Workplace And Gender Relations Survey Of Active Duty Members

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I. INTRODUCTION

A. BACKGROUND

In his commencement remarks to the graduating U.S. Naval Academy (USNA) class of 2013, President Barack Obama cautioned the future leaders of the Navy and the Marine Corps that “those who commit sexual assault are not only committing a crime, they threaten the trust and discipline that makes our military strong” (the White House, 2013). He continued by saying, “we need to be determined to stop these crimes, because they’ve got no place in the greatest military on earth” (2013). As clearly articulated by the president of the United States in his commencement address, the top leadership of the country and U.S. Armed Forces recognize sexual assault as a serious problem. However, the scope of the problem and impacts of sexual assault on the U.S. military are not fully known. Current and future leaders of the U.S. military services need to understand the costs of the problem to combat sexual assault effectively.

The president of the United States spoke to the USNA class of 2013 at a time when media outlets prominently featured U.S. military sexual-assault cases and statistics in news stories on a regular basis. The media attention was garnered from several high profile sexual-assault cases involving military leadership and the release of the ninth Department of Defense (DoD) annual report on sexual assault in the military. The DoD’s congressionally mandated report projected an estimated 26,000 service members experienced instances of unwanted sexual contact among the uniformed members of the DoD during fiscal year (FY) 2012. This estimate reflects an increase of approximately 35% from FY 2010 estimates of service members experiencing unwanted sexual contact.

To properly wage a battle against sexual assault in the U.S. military, leadership should be armed with a well-founded understanding of the problem. What costs do the U.S. military organizations bear as a result of sexual assault with the uniformed ranks? What are the impacts on the military services from high-profile sexual-assault cases and increases in estimated instances of sexual assault? In other words, what do sexual assaults against 26,000 active-duty service members cost the U.S. military? These are

just a few of the questions that need to be addressed to provide leadership an informed foundation for combatting and eliminating sexual assault from the “greatest military on earth” (2013).

Policy decisions are often evaluated using cost-benefit analysis techniques. This research provides decision makers with a better understanding of costs attributed to sexual assaults. With this information, military leadership will be armed with cost-benefit decision-making tools to evaluate and select prevention and response policies in the fight against sexual assault. The DoD joint chiefs and the commandant of the U.S. Coast Guard (USCG) have elevated the problem of sexual assault in the military and are determined to “eliminate sexual assault crimes within our ranks” (Dempsey, 2012). They have formalized strategic approaches to combating sexual assault through the DoD Sexual Assault Prevention and Response Strategic Plan and the USCG Sexual Assault Prevention and Response Strategic Plan 2013–2017. This research is particularly important because it quantifies many previously unknown costs associated with sexual assault, many of which are hidden and are not obvious to decision makers. Once decision makers understand all the costs associated with sexual assaults in the military, they may make different decisions regarding prevention, intervention, response, and accountability strategies and policies to move the services toward the goal of eradication of sexual assault from the military.

B. OBJECTIVE OF STUDY

Sexual assault is a life-altering experience that affects victims, their families, and their support networks, imposing significant monetary and non-monetary costs. In addition, there are large monetary costs to the military services attributable to sexual assault within the ranks. To date, a comprehensive analysis of organizational costs due to sexual-assault incidents within the active-duty workforce is not available. This project will attempt to attribute quantifiable costs to impact elements of sexual assault and to aggregate those costs across the service populations.

Specifically, this research examines and attempts to quantify the direct and indirect annual monetary organizational costs of sexual assaults to the five military

branches (Air Force, Army, Navy, Marine Corps, and Coast Guard). The project's first objective is to identify a complete representation of potential costs associated with sexual assaults in the U.S. military. The second objective is to develop or apply existing cost-estimation methodology to each of the associated costs. The next objective is to aggregate costs applicable to each U.S. military branch to determine the overall cost of sexual assaults to the U.S. military. The last objective is to discuss implications for U.S. military leadership and areas for further research.

C. RESEARCH QUESTIONS

This research paper will attempt to answer a number of questions concerning the organizational costs of sexual assaults to the U.S. military services.

- What is the estimated aggregate total annual dollar cost (in 2012 dollars) of sexual assaults committed against or by active-duty uniformed members in the five U.S. military services in FY 2012?
- What are the direct and indirect organizational costs associated with workplace sexual assault?
- What costs associated with workplace sexual assault most impact the estimated aggregate organizational costs to the U.S. military?
- How sensitive are the estimated organizational costs to varying assumptions made in the analysis?

D. SCOPE OF STUDY

This study estimated the aggregate organizational costs resulting from sexual assaults committed against or by a uniformed military member in FY 2012. The direct and indirect organizational costs to the U.S. military services associated with reported and unreported sexual-assault incidents that occurred in FY 2012 will be estimated in 2012 dollars. Costs to the individuals involved in sexual assaults will not be included, nor will costs that are incurred in FY 2012 for sexual-assault incidents that occurred before FY 2012. For example, if an alleged perpetrator of a sexual assault was tried at court-martial in FY 2012 for an incident that occurred in FY 2011, costs associated with the court-martial proceedings are not accounted for in this study. However, sexual-assault

incidents that occurred in FY 2012 but not prosecuted until FY 2013 or later are included in the organizational costs related to FY 2012 sexual-assault incidents. Costs associated with sexual-harassment incidents that do not fit the definition of sexual assault are not included in this research.

E. SUMMARY OF RESULTS AND RECOMMENDATIONS

This research found that separation and replacement costs, productivity-reduction costs, and case-prosecution costs contribute up to 99% of the organizational costs of sexual assault in the U.S. military. The total estimated organizational costs related to sexual-assault incidents involving active-duty service members in the five U.S. armed forces in FY 2012 range from a minimum of \$89M to a maximum of \$1.43B.

This research provides a starting point for informed decision making regarding sexual-assault prevention and response strategies and policies for the DoD and USCG. Additional research is recommended to quantify a more precise aggregated estimated organizational cost.

F. ORGANIZATION OF STUDY

This research paper is organized into five chapters. Chapter II provides background information and a literature review. Section A briefly presents an overview of DoD and Coast Guard annual sexual-assault reporting requirements and resulting reports. Section B provides an overview of selected workplace sexual-harassment literature and studies. Section C presents the framework used in this study to estimate the organizational costs of sexual assault in the U.S. military services.

Chapter III is divided into four sections and focuses on the method-and-research approach. Section A provides a review of the problem statement. Section C follows with a discussion of behavioral-costing methodology, which is used to estimate many of the relevant costs. Section D details data collection for the study.

Chapter IV presents the data analysis and findings of the study and is divided into three sections. Section A provides an introduction to the chapter, while Section B presents assumptions and the data analysis in detail. Section C presents sensitivity analysis to assess the robustness of the estimates used in the analysis. Section D points out the limitations of the study. Chapter V exhibits research conclusions and recommendations.

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II. BACKGROUND AND LITERATURE REVIEW

A. ANNUAL DEPARTMENT OF DEFENSE AND COAST GUARD REPORTS ON SEXUAL ASSAULT

Sexual assault continues to be a serious crime in the active-duty workforce of the U.S. military services. As such, the Secretary of Defense is required by Section 1631(d) of Public Law 111-383, the Ike Skelton National Defense Authorization Act for FY 2011, to “submit to the Committees on Armed Services report of sexual assaults provided by the Military Departments, along with his analysis” (Department of Defense, 2013a). Similarly, the commandant of the Coast Guard is required by Section 217 of Public Law 111-281, the Coast Guard Authorization Act of 2010, “to submit a report on the sexual assaults involving members of the Coast Guard to the Committee on Transportation and Infrastructure and the Committee on Homeland Security of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate” (United States Coast Guard, 2013).

In response to legislative requirements to report sexual assaults involving military members each year, the Secretary of Defense submitted the *Department of Defense Fiscal Year 2012 Annual Report on Sexual Assault in the Military* and the commandant of the Coast Guard submitted *Sexual Assault in the U.S. Coast Guard in FY 2012*. These reports contain statistics of reported sexual assaults and the disposition status of sexual assault investigations for the five military services. In addition, the DoD also submitted a second volume of the *Department of Defense Fiscal Year 2012 Annual Report on Sexual Assault in the Military*, which includes results and analysis of the 2012 WGRA. Data from these reports provided the primary data set for this MBA research project.

B. SEXUAL HARASSMENT AND SEXUAL ASSAULT DEFINED

A large body of research focuses on sexual harassment in the workplace. This research focuses specifically on sexual assault, which may be a form of sexual harassment. The U.S. Equal Employment Opportunity Commission defines sexual harassment as follows:

Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when this conduct explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance, or creates an intimidating, hostile, or offensive work environment. (U.S. Equal Employment Opportunity Commission, 2009)

The DoD defines sexual assault as follows:

Intentional sexual contact characterized by use of force, threats, intimidation, or abuse of authority or when the victim does not or cannot consent. The term includes a broad category of sexual offenses consisting of the following specific UCMJ offenses: rape, sexual assault, aggravated sexual contact, abusive sexual contact, forcible sodomy (forced oral or anal sex), or attempts to commit these offenses. (Department of Defense, March 2013, p. 91)

C. OVERVIEW OF THE PROBLEM OF SEXUAL ASSAULT IN THE U.S. MILITARY

According to the 2012 *Department of Defense Annual Report on Sexual Assault in the Military*, 3,374 cases of sexual assault were reported in the department in fiscal year (FY) 2012 (Department of Defense, 2013a). In addition, 156 cases of sexual assault were reported in the U.S. Coast Guard in FY12 (United States Coast Guard, 2013). However, research shows that only a small percentage of sexual assaults are actually reported. The National Women's Study concluded that only 16% of rape victims reported the crime to authorities (National Victim Center and Crime Victims Research and Treatment Center, 1992). "This reporting behavior is mirrored in the U.S. Armed Forces. Over the past 6 years, the Department estimates that fewer than 15 percent of military sexual assault victims report the matter to a military authority" (Department of Defense, 2013a).

Due to the recognized significant under-reporting of sexual-assault incidents, the military services use estimated sexual-assault statistics to understand the scope of the problem within the military. The primary tool used to estimate the number of sexual assaults experienced by uniformed members is a biennial survey, *The Department of Defense Workplace and Gender Relations Survey of Active Duty Members* (WGRA). The results from WGRA provide insight into various workplace and gender-related topics, including sexual assault. Results from the 2012 WGRA indicate an estimated 26,000

DoD service members (6.1 percent of active duty women and 1.2 percent of active duty men) experienced some type of unwanted sexual contact—the survey term for the range of crimes that constitute sexual assault under military law—within the 12 months prior to taking the survey (Department of Defense, 2013b), as displayed in Figure 1. The percentage of women whose survey responses indicated they experienced sexual assault in the year prior to the 2012 WGRA increased to 6.1 percent from 4.4 percent of women in the 2010 WGRA (Department of Defense, 2013b), as indicated in Figure 2. The U.S. Coast Guard participated in the 2006 WGRA and the 2010 WGRA, but not the 2012 WGRA.

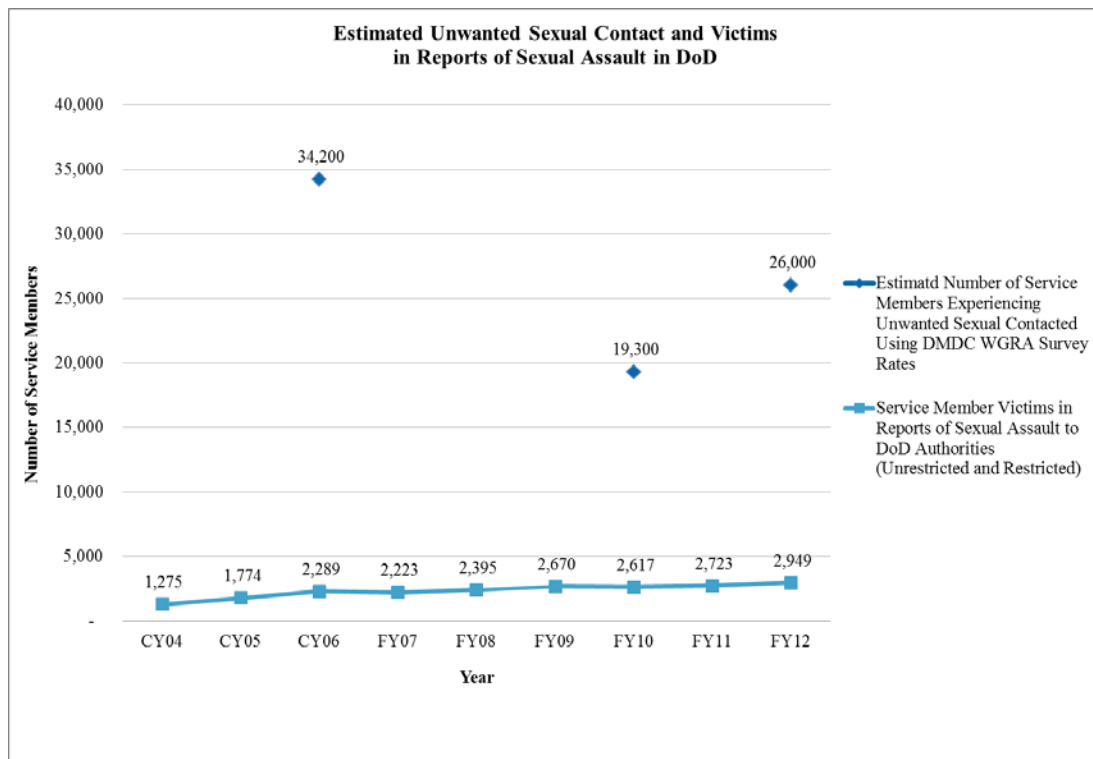


Figure 1. Number of DoD Service Member Victims in Reports of Sexual Assault and Estimated Number of DoD Service Members Experiencing Unwanted Sexual Contact Using WGRA Data (from Department of Defense, 2013).

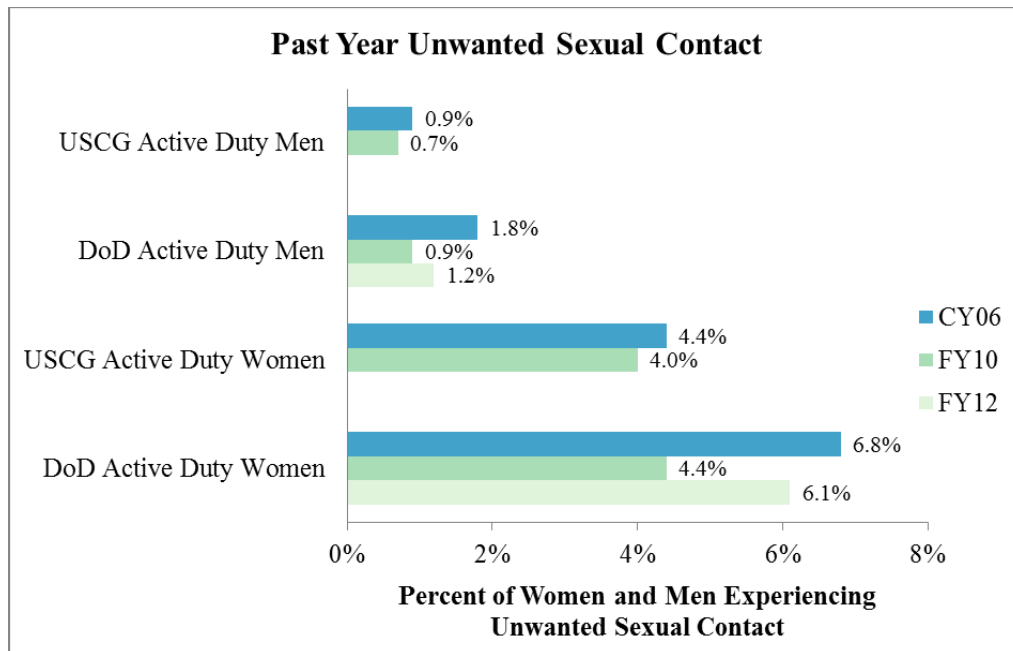


Figure 2. Rates of Unwanted Sexual Contact from WGRA, 2006 through 2012 (after Department of Defense, 2013b).

In a technical report prepared by the Centers for Disease Control and Prevention (CDC) for the DoD, researchers found similar percentages of women in the national population and the female active-duty population experienced intimate-partner violence (IPV) and sexual assaults over the past year, the past three years, and over their lifetime (Black & Merrick, 2013). This study also found “[w]ith respect to deployment history, active duty women who were deployed during the three years prior to the survey were significantly more likely to have experienced both IPV and contact sexual violence during that time period compared to active duty women who were not deployed” (Black & Merrick, 2013, p. 1). It should be noted that this statistically significant difference did not appear for women who were deployed in the year prior to the survey, suggesting that the violence the women experienced in the three years prior to the survey may have occurred upon return from deployment.

D. OVERVIEW OF WORKPLACE SEXUAL-HARASSMENT LITERATURE AND STUDIES

1. Literature Review

Over the past several decades, many researchers have published studies on the topic of workplace sexual harassment (SH). Paula McDonald published *Workplace Sexual Harassment 30 Years on: A Review of the Literature* (2011). McDonald's comprehensive literature review aims to: "first, with a focus on workplace SH as it pertains to management and organizations, to synthesize the accumulated state of knowledge in the field; second, to evaluate this evidence, highlighting competing perspectives; and third, to canvass areas in need of further investigation." Of particular interest with regard to this research, which attempts to estimate the cost of sexual assaults, McDonald's literature review summarized study findings related to SH costs and outcomes experienced by SH targets, which are presented in Table 1.

McDonald also provides a summary of study findings depicting the types of organizational environments with more prevalent problems with SH. This research finds these "organizations are characterized by larger power differentials between organizational levels, with...higher reported incidences for military samples" (McDonald, 2012). In addition, "studies consistently indicated that SH is more frequently experienced by women in male-dominated occupations and work contexts" (2012).

Table 1. Sexual Harassment Costs and Outcomes (after McDonald, 2011)

Sexual Harassment Cost & Outcomes	Author(s) of Referenced Literature (As Cited in McDonald, 2011)	Year of Publication
A range of significant negative psychological, health and job-related outcomes	Fitzgerald et al.	1997
Mental and physical health consequences from “irritation and anxiety to anger, powerlessness, humiliation, depression and post-traumatic stress disorder”	Bergman et al. Crocker & Kalembra Magley et al. Stockdale Willness et al.	2002 1999 1999 1998 2007
“Poorer psychological outcomes...associated with harassment that: is perpetrated by a supervisor...; involves sexual coercion; occurs cross-racially; takes place over a long period of time; and occurs in male dominated settings”	Collinsworth et al. Woods et al.	2009 2009
“[O]bserving or hearing about the SH of co-workers can foster ‘bystander’ stress”	Schneider	1996
Co-workers may experience “other negative outcomes that parallel those of direct targets”	Miner-Rubino & Cortina	2007
Co-workers may experience “team conflict, declines in financial performance and occupational stress.”	Raver & Gelfand	2005
“Job-related factors consistently linked with SH include absenteeism, lower job satisfaction, commitment and productivity, and employment withdrawal”	Chan et al. Charlesworth Fitzgerald et al. Hayes HREOC	2008 2006 1999 2004 2004a
“Direct organizational costs include...turnover and resulting recruitment, training and development, the costs of investigating the complaint and the legal costs arising from actions brought against the organization.”	Faley et al.	1999
“Indirect...costs include reduced morale and motivation of employees, tardiness or absenteeism, damage to external reputation and loss or shareholder confidence.”	Fitzgerald et al. HREOC Lengnick-Hall	1997a 2004b 1995

2. Meta-Analysis Study

Findings of an important body of research conducted by Chelsea Willness and her colleagues are presented in *A Meta-Analysis of the Antecedents and Consequences of Workplace Sexual Harassment* (Willness, Steel, & Lee, 2007). The study “meta-analyzed data from 41 studies, with a total sample size of nearly 70,000 respondents, to examine

several negative consequences of workplace SH as well as how situational factors may play a role in facilitating these occurrences” (Willness et al., 2007, p. 127). The framework shown in Figure 3 depicts organizational antecedents and the outcomes of sexual harassment incidents that were analyzed by Willness.

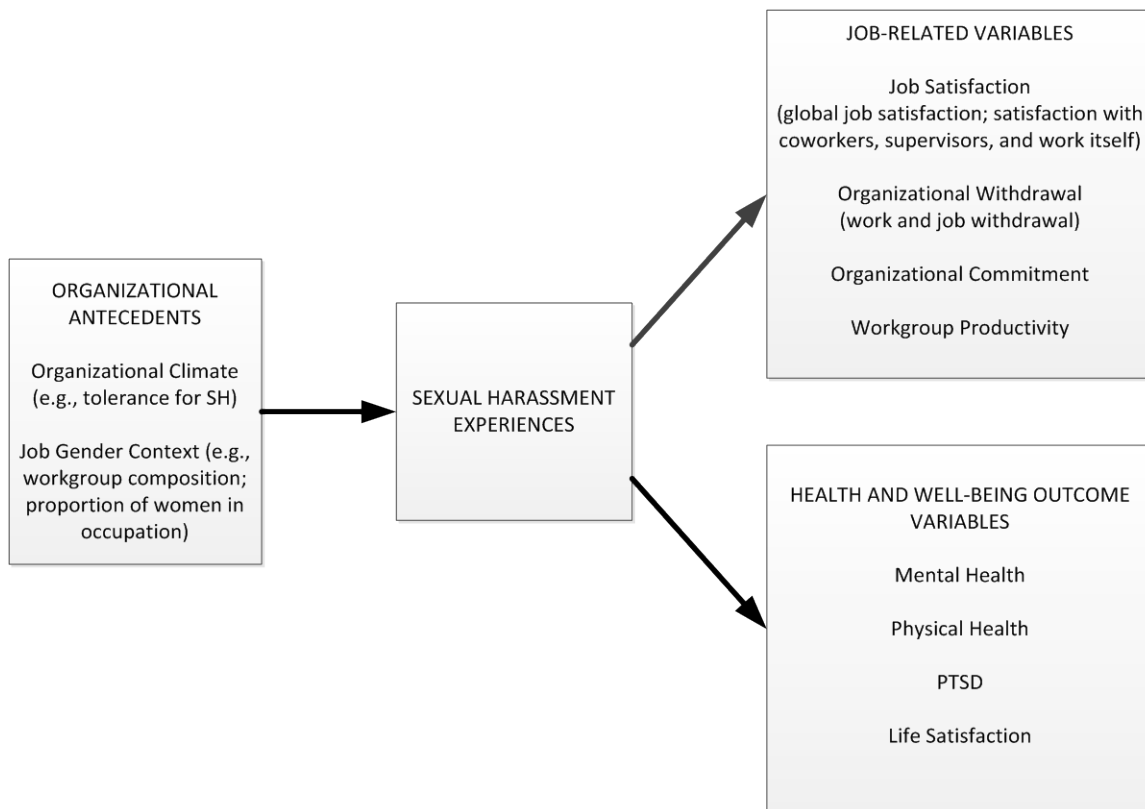


Figure 3. Visual Representation of Meta-Analyzed Antecedent and Outcome Variables in Relation to Sexual Harassment Experiences (after Willness, et al. 2007)

Results from the meta-analysis indicate the “organizational context play an important role in facilitating SH” (Willness et al., 2007, p. 150). In addition, this research conducted by Willness demonstrates that SH-incident consequences include decreased job satisfaction, increased organizational withdrawal, and negative health and well-being outcomes. Specific outcomes from this research include correlation relationships between SH experiences antecedent and outcome variables. Of particular interest for estimating the organizational costs of sexual assault are the relationships between SH experiences and certain job-related outcomes, as shown in Table 2.

Table 2. Meta-Analyses of Relationships Between Sexual Harassment Experiences and Job-Related Outcome Variables (after Willness et al., 2007)

					<u>95% CrI</u>		<u>95% CoI</u>	
Variables	<i>k</i>	<i>N</i>	<i>r_o</i>	<i>r_c</i>	L	U	L	U
<i>Job-related outcomes</i>								
Job withdrawal	16	6,201	.129	.161	.09	.24	.12	.20
Work withdrawal	12	4,940	.236	.299	.30	.30	.26	.34
Workgroup productivity	6	27,425	-.202	-.202	-.33	-.11	-.27	-.17

Note: *k* = number of samples. *N* = total number of data points. *r_o* = uncorrected weighted mean correlations. *r_c* = weighted mean correlations corrected for reliability. CrI = credibility interval. CoI = confidence interval.

E. SEXUAL ASSAULT ORGANIZATIONAL COSTS FRAMEWORK

1. Sexual Assault Reporting Options in the DoD and the Coast Guard

The DoD and the Coast Guard have two reporting options for individuals who are sexually assaulted and elect to report: unrestricted and restricted. Although DoD and Coast Guard directives vary slightly as to who is covered under the restricted and unrestricted reporting options, the specific criteria for option selection and case protocol are equivalent. In the DoD, “service members and military dependents 18 years and older who have been sexually assaulted” have the option to make restricted and unrestricted reports (Department of Defense, March 2013). The Coast Guard allows unrestricted and restricted reports by service members and civilian spouses of service members (not all military dependents over the age of 18). Victims officially elect their reporting preference by completing a victim reporting-preference statement (VPRS): DD Form 2910 in the DoD and Form CG-6905 in the Coast Guard. If a victim elects to make an unrestricted report, the election cannot subsequently be changed to a restricted report. A restricted report can be changed to an unrestricted report by the sexual-assault victim.

a. Unrestricted Reporting

Unrestricted reporting “triggers an investigation, command notification, and allows a person who has been sexually assaulted to access medical treatment and counseling” (United States Coast Guard, 2012b). All unrestricted reports of sexual assault are reported to the unit commanders and to the appropriate military criminal-investigative organization (MCIO). Individuals eligible to make an unrestricted report may report an assault through any official reporting channel, for example, chain of command, duty officers, medical personnel, sexual-assault response coordinators (SARCs), or victim advocates (VAs).

b. Restricted Reporting

Restricted reporting “allows sexual assault victims to confidentially disclose the assault to specified individuals (i.e., SARC, sexual-assault prevention and response (SAPR), VA, or healthcare personnel)...and receive medical treatment, including emergency care, counseling, and assignment of a SARC and SAPR VA, without triggering an official investigation” (Department of Defense, April 2013). While unit commanders are notified of a restricted report, they are not given information which may lead to identification of the victim or the alleged perpetrator of the assault.

2. Study Organizational Cost Component Framework

Identification of the various organizational costs associated with sexual assaults involving uniformed military members is displayed in a framework in Figure 4. Different responses and consequences, and therefore their associated costs, are dependent on victims’ reporting decisions. The framework breaks down military sexual assaults into three categories, based on reporting options: unreported sexual assault, restricted sexual assault report, and unrestricted sexual assault report. Organizational costs associated with victims and alleged perpetrators are assigned to each of the reporting categories. The DoD refers to the alleged perpetrator as a subject because he or she is the subject of an investigation. I use the terms “alleged perpetrator” and “subject” interchangeably.

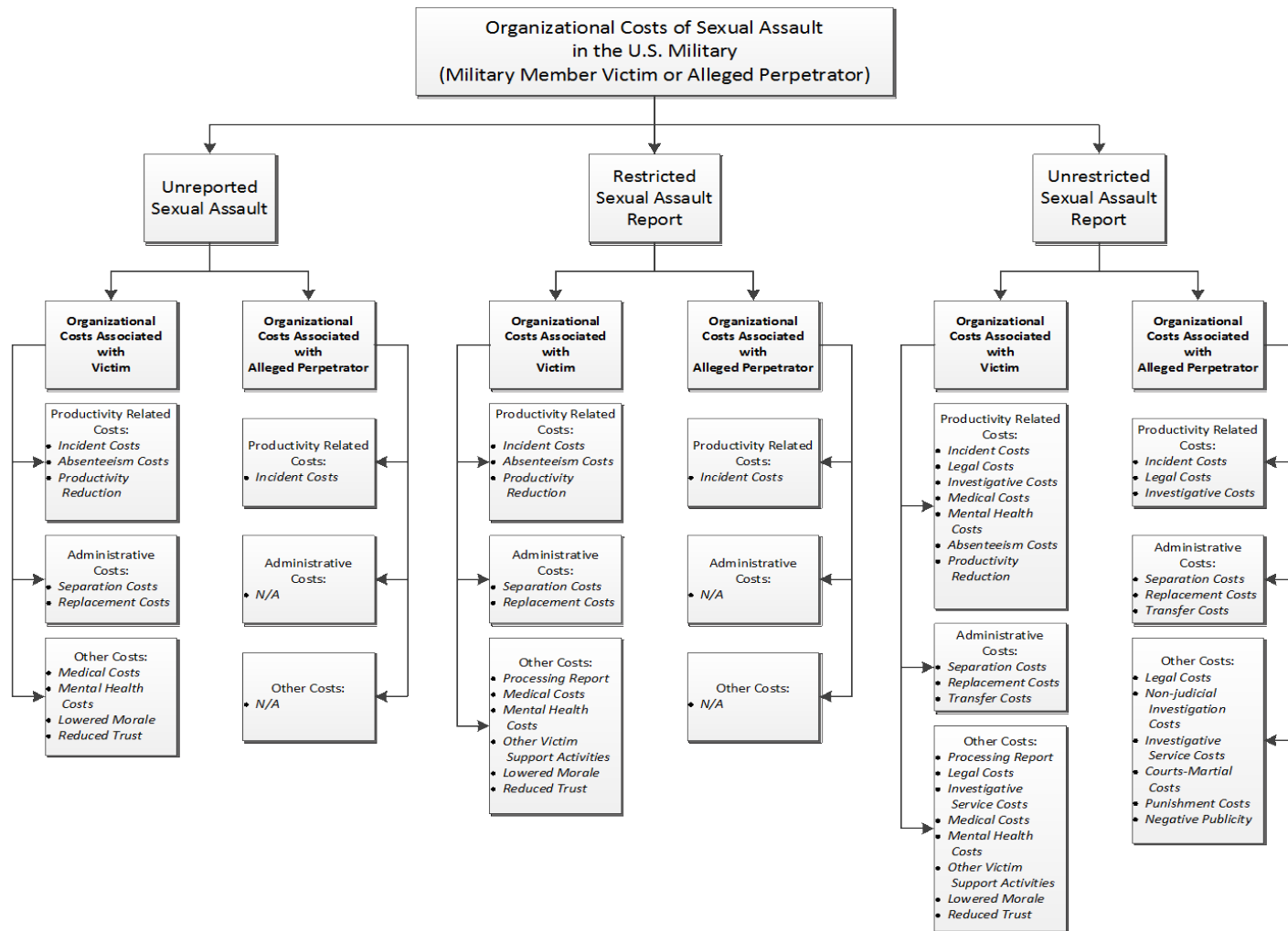


Figure 4. Framework for Organizational Costs of Sexual Assault in the Military

3. Literature Supporting Cost Components

A study by Robert H. Faley and his colleagues presented a model for estimating the annual organizational cost of sexual harassment (Faley, Knapp, Kustis, & Dubois, 1999). The model used behavioral costing, which “attach[es] a cost to employee behavior [to] demonstra[e] the seriousness of an organizational problem” (Faley et al., 1999). The model categorizes costs associated with sexual harassment into three focus areas: productivity-related costs, administrative costs, and other costs. Using a conservative approach and omitting costs for which data was unavailable or incomplete, Faley estimated sexual-harassment costs to the U.S. Army in 1988 to be over \$250 million in 1994 dollars (1999).

This MBA project applies the behavioral-costing-model framework developed by Faley and his associates to the five military branches and attempts to quantify and aggregate some of the costs omitted in previous studies. The following three sections of this chapter identify reports, studies, or data collection methods that provide data or insight for estimating the various costs and expenses in Figures 5, Figure 6. , and Figure 7.

a. Unreported Sexual Assault

The primary source material used to estimate sexual-assault cost elements for unreported sexual assaults is shown in Figure 5.

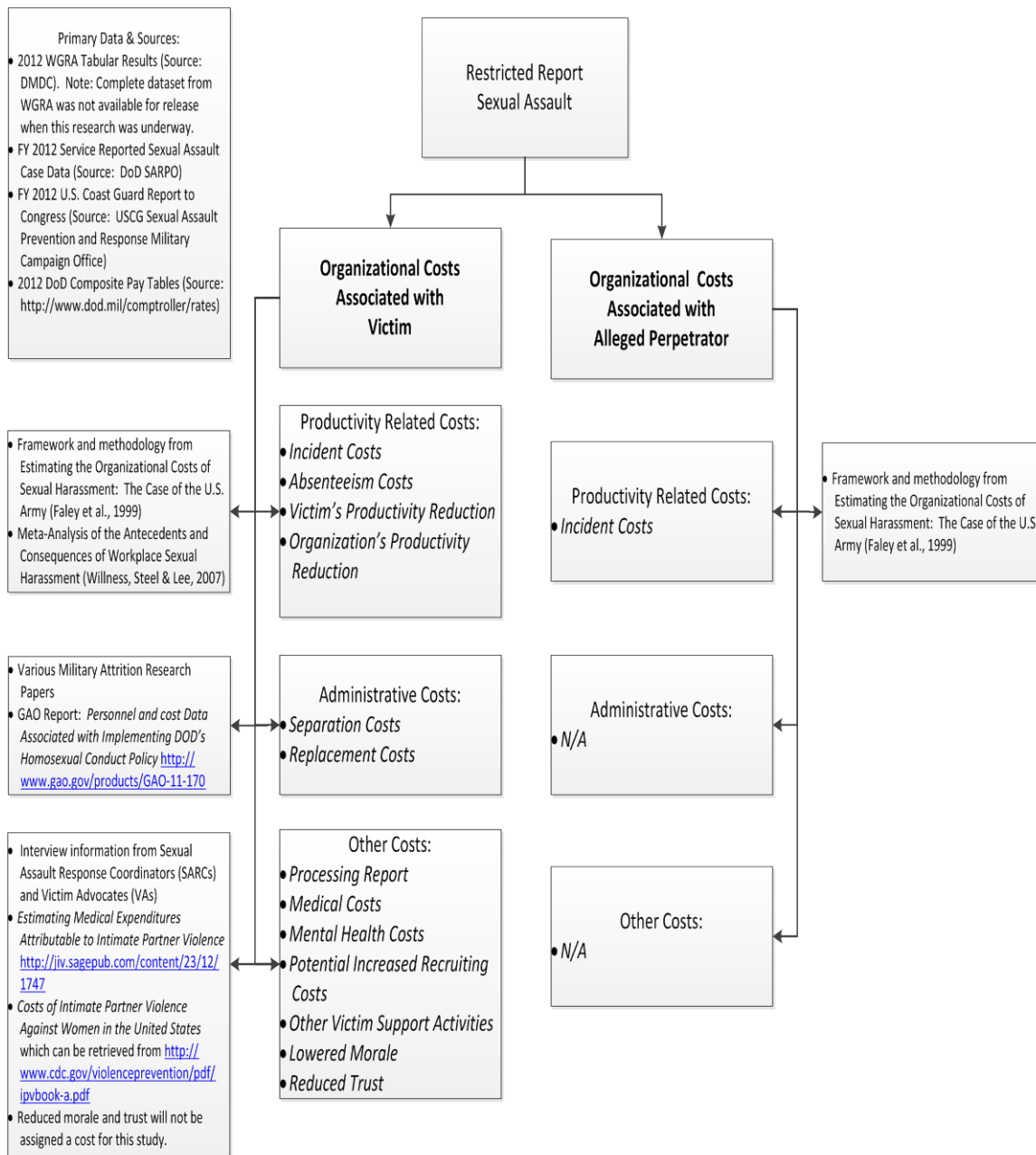


Figure 6. Framework Identifying Sources of Cost-Component Data for Restricted Report Sexual Assaults

c. Unrestricted Report Sexual Assault

The primary source material used to estimate sexual-assault cost elements for sexual assaults reported using unrestricted reporting options is shown in Figure 7.

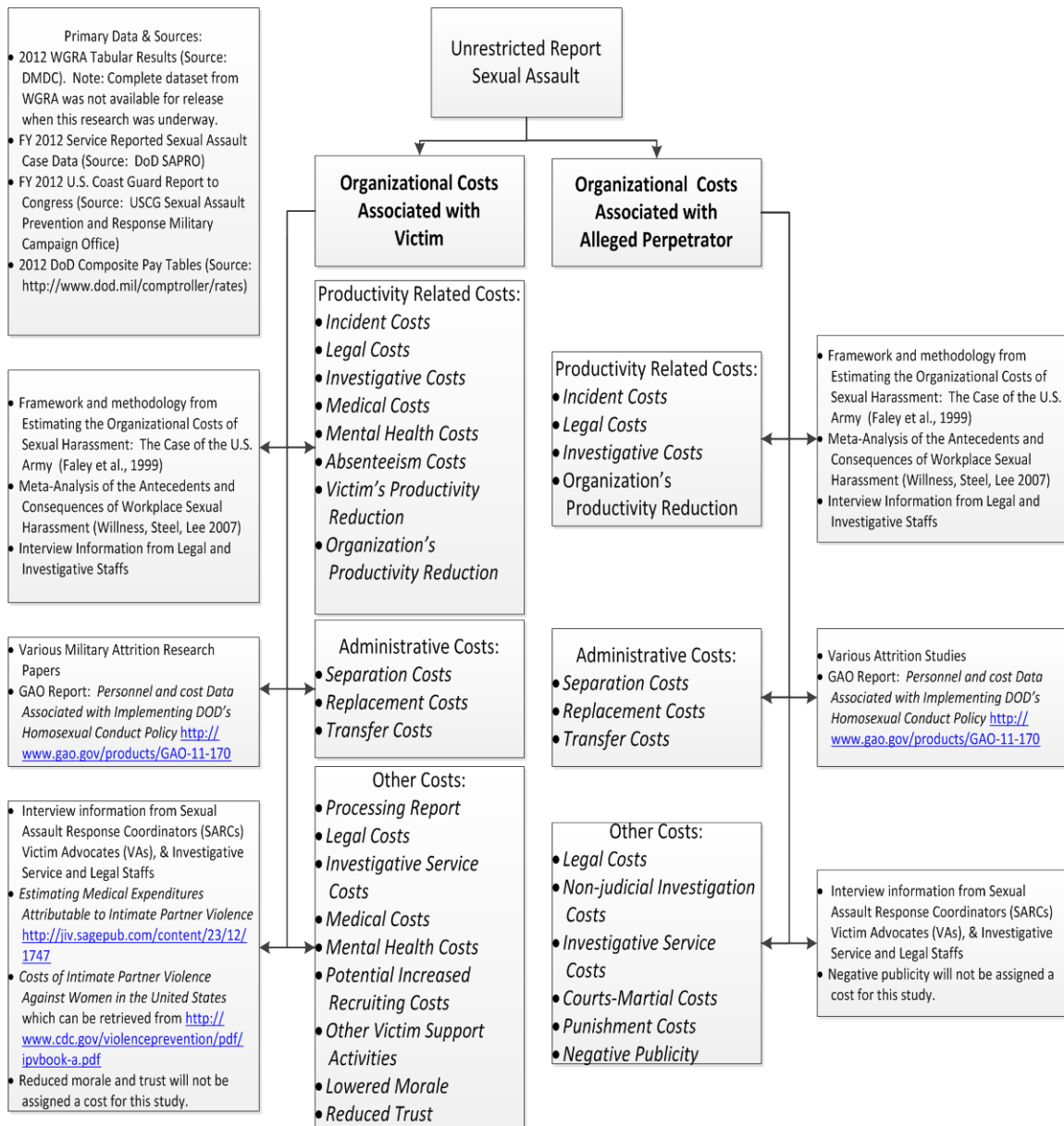


Figure 7. Framework Identifying Sources of Cost-Component Data for Unrestricted Report Sexual Assaults

III. METHOD AND RESEARCH APPROACH

A. INTRODUCTION

This research examines and attempts to quantify and aggregate the direct and indirect monetary organizational costs to the U.S. military from sexual assaults that are believed to have occurred in FY 2012. Potential costs associated with sexual assaults in the U.S. military are identified in the framework in Figure 4. in Chapter II. The researcher applied different methods of cost estimation to the various cost elements, depending upon the data available for each element. The degree of confidence in cost estimates varies, depending upon the data used in the calculations.

B. BEHAVIORAL-COSTING METHODOLOGY

Behavioral-costing methodology places monetary values on behavioral outcomes that affect organizations. This method does not focus on the value individuals bring to the organization; instead, it focuses on the economic consequences to organizations of individuals' behaviors (Casico, 1991). Mr. Faley and his colleagues used the behavioral-costing methodology to estimate the organizational cost of SH in the U.S. Army in 1988. In their article, Mr. Faley and his colleagues state, "Attaching a cost to employee behavior is one way of demonstrating the seriousness of an organizational problem: problems viewed as inconsequential to the organization are often viewed differently once their direct impact on the 'bottom line' is more fully understood (Faley et al., 1999).

Use of the behavioral-costing methodology in the current research does not imply the U.S. military leadership views sexual assault as inconsequential. The current research project uses behavioral costing to emphasize a relatively unexplored facet of a significant problem by attempting to estimate the impact of sexual assaults on the military's bottom line.

The framework presented in Figure 4. forms the structure of the model used to estimate the organizational cost to the U.S. military attributed to the sexual assaults involving military members in FY 2012. Following the model Faley and his colleagues

used to estimate the organizational cost of SH in the Army, the costs elements are categorized by productivity-related costs, administrative-related costs, and other costs (Faley et al., 1999).

The estimated costs of the various elements in this research project were generated with varying degrees of ease and certainty. Incident costs and productivity costs were estimated with relative ease using the DoD sexual-assault statistics and WGRA survey data. On the other hand, estimating victim advocacy, investigative, and legal services required interviews with subject-matter experts and the cost estimates relied on data collected from a few experienced individuals. These service-related cost estimates are less certain, due to the varying complexity of sexual assault cases and the limited data collected for this project. Costs related to voluntary separation from military service due to sexual assault were extremely difficult to estimate, because the DoD does not routinely ask separating members if they are leaving the service as a result of sexual assault. Estimating training costs of members replacing separated sexual-assault victims and subjects is also difficult, due to widely varying training costs of officers and enlisted members. In addition, DoD sexual-assault data does not include information about the career specialty of victims or subjects, making cost estimation of replacement training highly uncertain.

1. Productivity Related Costs

Productivity-related costs account for the annual economic costs associated with reduced work productivity and increased job-withdrawal behaviors for victims and subjects as a result of one or more sexual-assault incidents. This includes victims' and subjects' time for sexual-assault incidents that occurred during the workday, victims' increased absenteeism, work productivity reduction as reported by the victim in the 2012 WGRA survey, and overall organizational productivity reduction related to sexual-assault incidents. Productivity reduction from sexual assaults also results from victim and subject involvement in legal, investigative, medical, and mental-health activities. This researcher captured productivity and other related costs from legal, investigative, medical, and mental-health activities in the "other costs" category. The productivity-related costs

considered in this study are associated with both reported and unreported sexual-assault incidents in the U.S. military and are shown in Figure 8. Costs associated with productivity reduction of organizations as a result of sexual assault were not included in the cost estimates for this research, but are a potential topic for future research.

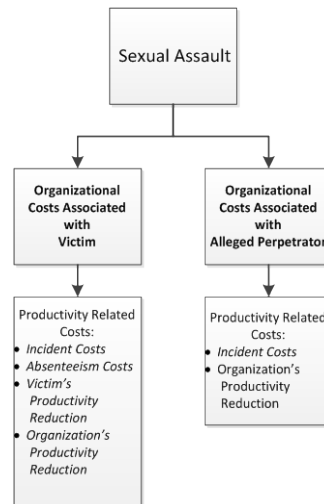


Figure 8. Productivity-Related Costs Associated with Sexual Assaults in the Military

I calculated productivity-related cost estimates using WGRA survey responses coupled with findings from past research. The data used for victim productivity-reduction cost estimates was based on respondents' opinions of reduced productivity due to unwanted sexual contact and not actual measures of reduced productivity. Costs related to increased absenteeism due to sexual assaults were based on past research published in the journal article *The Economic Toll of Intimate Partner Violence against Women in the United States*, which determined that 20 percent of rape victims were absent an average of 8.1 days from paid work due to their assaults. Productivity-related costs comprise a significant portion of the costs related to sexual assaults in the military, in the range of 10% to 39%. A medium certainty is assigned to productivity-related estimates, due to the lack of measurable reduced productivity and increased absenteeism.

2. Administrative Costs

Administrative-related costs account for the annual economic costs associated with separating individuals from the military, replacing separated individuals, and unplanned transferring of individuals due to sexual-assault incidents. Both victims and subjects separate from the military as a result of sexual assaults. Victims may separate to remove themselves from the situation in which the assault occurred. Subjects may be discharged or resign from military service. Costs associated with separation include administrative, relocation, recruitment of replacement, and training of replacements. Figure 9. details the administrative-related costs associated with unreported and reported sexual-assault incidents.

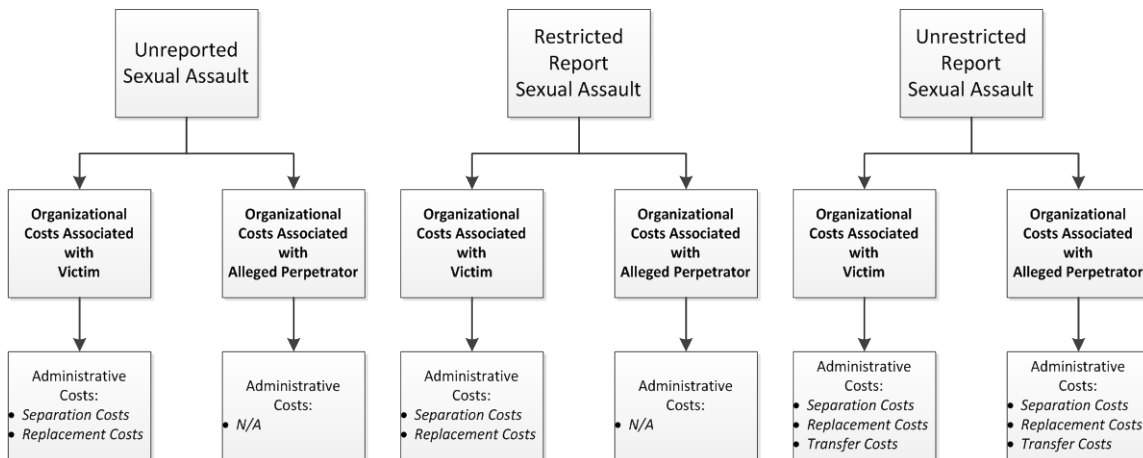


Figure 9. Administrative-Related Costs Associated with Sexual Assaults in the Military

This researcher is more certain of costs estimates relating to the discharge or resignation of subjects of sexual-assault investigations than estimates capturing costs associated with victims leaving the military. DoD 2012 sexual-assault statistics provide data about subjects that were discharged or resigned due to a related investigation. With information available from the DoD regarding certain details about subjects who left the service as a result of sexual-assault incidents, cost estimates about the departure of these members from the service are more robust and certain. Unfortunately, the DoD does not track the number of victims that depart their services as a result of sexual assaults,

although research has shown that this number is significant. The lack of actual data for service members resigning as a result of such incidents required the researcher to estimate how many victims left the service as a result of sexual assault. The separation and replacement costs are estimated to be the largest group of costs associated with sexual assaults in the military and this researcher has a low confidence in these estimates in aggregate.

3. Other Costs

“Other costs” are annual economic costs related to report processing, medical and mental health care, legal action, investigation, courts-martial, and victim support. This category also captures costs associated with potential reduced morale, reduced trust, and increased recruiting costs, organization wide. Figure 10. details the other costs associated with unreported and reported sexual-assault incidents. Lowered-morale and reduced-trust costs were not estimated in this research, but are potential areas of study for future research.

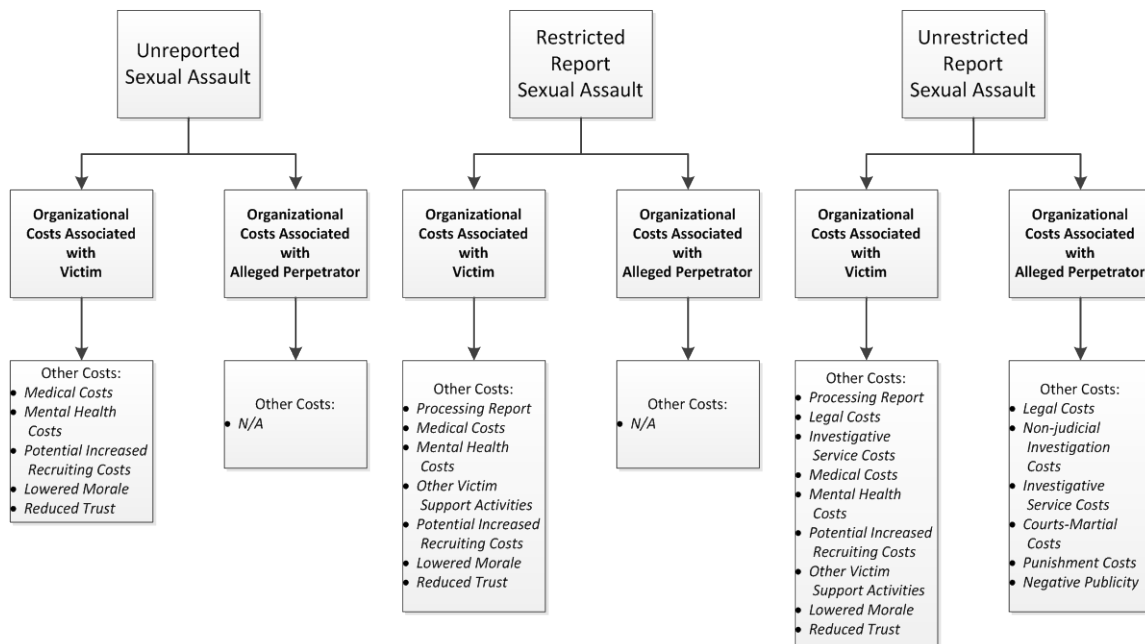


Figure 10. Other Costs Associated with Sexual Assaults in the Military

This researcher gathered data for many of other costs through personal interviews and electronic correspondence with subject-matter experts. For example, SARCs and VAs were interviewed to gather data on how much time was spent on initial report processing, medical services, and other victim-support activities. Members of the Army and Coast Guard Judge Advocate General (JAG) Corps provided detailed information about how sexual assault cases move through JAG offices, who is involved in the phases of the judicial process, and how long each phase lasts. In addition, a representative from the Army Criminal Investigative Command (CID) provided information about the investigative process for sexual assaults. Costs related to judicial and non-judicial proceedings involving subjects allegedly involved in sexual-assault incidents constitute 17% to 32% of the total estimated costs related to sexual assaults in the military. This researcher has assigned a high certainty to cost estimates related to the disposition of cases, due to the detailed data received from experts and data published by DoD regarding the disposition of cases.

4. Total Cost of Sexual Assault

The total cost of sexual assault represents aggregated costs from the three main costing categories: productivity, administrative, and other costs related to sexual assaults committed by or against U.S. active duty military members in FY 2012. This researcher has various levels of confidence in the cost estimates presented herein, which are summarized in Table 3. The uncertainty results from lack of data, limited data, and uncertain data, depending on the cost category.

Table 3. Researcher's Cost-Element Certainty Overview

Cost Element	Data Source(s)	Certainty
Productivity Related Costs		
<i>Incident Costs</i>	DoD Statistics, WGRA Data, Literature	Medium
<i>Absenteeism Costs</i>	WGRA Data, Literature	Medium
<i>Productivity Reduction</i>	WGRA Data, Literature	Medium
Administrative Costs		
<i>Separation/Replacement Related Costs</i>	DoD Statistics, WGRA Data, Literature	Low
Administrative Costs	DoD Statistics, WGRA Data, Literature	Medium
Replacement Training Costs	DoD Statistics, WGRA Data, Literature	Low
Replacement Recruitment Costs	DoD Statistics, WGRA Data, Literature	Low
Move/Travel Costs	DoD Statistics, WGRA Data, Literature	Low
<i>Emergency Transfer Costs</i>	DoD Statistics, Literature	High
Other Costs		
<i>Medical and Mental Health Costs</i>	DoD Statistics, Literature	Medium
<i>Report Processing Costs</i>	DoD Statistics, Interviews	High
<i>Other Victim Support Activities Costs</i>	DoD Statistics, Interviews	High
<i>Investigative Service Costs</i>	DoD Statistics, Interviews	Medium
<i>Legal Service Costs</i>	DoD Statistics, Interviews	High
<i>Non-judicial Investigation Costs</i>	DoD Statistics, Interviews	Medium
<i>Disciplinary / Punishment Costs</i>	DoD Statistics, Interviews	Medium
<i>Negative Publicity (Increased Recruiting Costs)</i>	WGRA Data, Literature	Low

C. DATA COLLECTION

Three sources of data were used as the basis for this research project:

- *2012 Workplace and Gender Relations Survey of Active Duty Members (WGRA): Tabulations of Responses*
- *Department of Defense Annual Report on Sexual Assault in the Military: Fiscal Year 2012 -Volume I* (Enclosure 1: Department of the Army, Enclosure 2: Department of the Navy, Enclosure 3: Department of the Air Force)
- *Sexual Assault in the U.S. Coast Guard in FY 2012: Report to Congress January 30, 2012*

1. 2012 WGRA: Tabulation of Responses

The DMDC conducted the 2012 WGRA from September 2012 to November 2012, which “continues a line of military sexual harassment research begun in 1988” (Defense Manpower Data Center, 2013b, p. 1). The questionnaire was designed to collect data on sexual harassment and associated consequences in the U.S. military services. In

2006, “the questionnaire was significantly revised to collect parallel information on sexual assault in the Services” (Defense Manpower Data Center, 2013b, p. 1). Excerpts from the 2012 WGRA covering areas of interest and analysis for the current research are provided in Appendix A.

There were 22,792 respondents to the 2012 WGRA from the U.S. Navy, Army, Air Force, and Marine Corps. The weighted survey response rate was 24% (Department of Defense, 2013a). To be eligible for participation, the active duty members “(1) had at least six months of service at the time the questionnaire was first fielded and (2) were below flag rank” (Defense Manpower Data Center, 2013b, p. 2). Sampling for groups with small populations and with historically low response rates were over-sampled (Defense Manpower Data Center, 2013a). “The [sample size] allocation was determined by an optimization algorithm that minimized the cost of the survey while meeting the precision requirements” (Defense Manpower Data Center, 2013a, p. iii). In addition, female Marines were all surveyed and the male Marines were over-sampled, per request from the Marine Corps.

Raw survey results were not available from DMDC at the time research and analysis for this project was being conducted. The researcher used data found in *2012 Workplace and Gender Relations Survey of Active Duty Members: Tabulations of Responses* in the place of raw data. In the *Tabulations of Responses*, “survey results are tabulated by service, pay grade, gender, race/ethnicity, experienced unwanted sexual contact (USC), and experienced sexual harassment” (Defense Manpower Data Center, 2013b pg. 3). Table 4. shows the number of respondents in each population and subpopulation, along with the estimated population for these populations of respondents as calculated by DMDC.

Table 4. Number of Respondents (Total) and Estimated Population by Reporting Categories, Part I (from DMDC, 2013b)

	Respondents			Estimated Population			
	Count	Percent		Totals		Percent	Max ME
TOTAL	22,792	100%		1,354,883	±7,667	100%	
Army	4,103	18%		535,833	±4,944	40%	±1
Navy	3,730	16%		307,261	±2,359	23%	±1
Marine Corps	10,416	46%		190,214	±2,155	14%	±1
Air Force	4,543	20%		321,575	±5,094	24%	±1
Enlisted	17,339	76%		1,123,405	±7,365	83%	±1
E1 – E4	8,223	36%		591,442	±7,039	44%	±1
E1 – E3	4,631	20%		314,364	±6,151	23%	±1
E4	3,592	16%		277,078	±3,422	20%	±1
E5 – E9	9,116	40%		531,963	±2,167	39%	±1
E5 – E6	6,526	29%		401,038	±2,001	30%	±1
E7 – E9	2,590	11%		130,925	±830	10%	±1
Officers	5,453	24%		231,478	±2,131	17%	±1
O1 – O3	2,994	13%		126,214	±653	9%	±1
O4 – O6	1,828	8%		85,805	±531	6%	±1
Deployed Past 12 Months	6,459	28%		433,326	±15,113	32%	±2
Not Deployed Past 12 Months	16,290	71%		919,077	±15,574	68%	±2
Non-Hispanic White	13,175	58%		828,144	±11,170	61%	±1
Total Minority	9,582	42%		525,628	±9,837	39%	±1
Non-Hispanic Black	3,386	15%		190,804	±9,633	14%	±1
Hispanic	3,839	17%		192,227	±10,707	14%	±1
Experienced USC	832	4%		25,965	±4,120	2%	±1
Not Experienced USC	21,960	96%		1,328,918	±8,583	98%	±1
Experienced SH	3,064	13%		93,854	±7,704	7%	±1
Not Experienced SH	19,728	87%		1,261,028	±10,606	93%	±1
FEMALES	11,553	51%		198,488	±825	15%	±1
Army	2,463	11%		72,334	±211	5%	±1
Navy	2,498	11%		51,204	±383	4%	±1
Marine Corps	3,716	16%		13,404	±126	1%	±1
Air Force	2,876	13%		61,546	±692	5%	±1
Enlisted	8,623	38%		161,578	±726	12%	±1
E1 – E4	4,461	20%		90,277	±590	7%	±1
E5 – E9	4,162	18%		71,300	±423	5%	±1
Officers	2,930	13%		36,911	±392	3%	±1
O1 – O3	1,819	8%		23,889	±358	2%	±1
O4 – O6	962	4%		11,360	±71	1%	±1
Experienced USC	716	3%		12,053	±1,143	1%	±1
Not Experienced USC	10,837	48%		186,436	±1,280	14%	±1
Experienced SH	2,756	12%		46,105	±1,893	3%	±1
Not Experienced SH	8,797	39%		152,384	±1,921	11%	±1
Deployed Past 12 Months	2,733	12%		47,041	±1,611	3%	±1
Not Deployed Past 12 Months	8,801	39%		151,048	±1,697	11%	±1

Table 4. continued Number of Respondents (Total) and Estimated Population
by Reporting Categories, Part I (from DMDC, 2013b)

	Respondents		Estimated Population				
	Count	Percent	Totals		Percent	Max ME	
Army Enlisted	1,689	7%	56,905	±137	4%	±1	
E1 – E4	814	4%	34,055	±129	3%	±1	
Army Officers	774	3%	15,429	±162	1%	±1	
Navy Enlisted	1,686	7%	43,012	±381	3%	±1	
E1 – E4	873	4%	26,274	±380	2%	±1	
Navy Officers	812	4%	8,192	±42	1%	±1	
Marine Corps Enlisted	3,153	14%	12,042	±116	1%	±1	
E1 – E4	1,761	8%	8,195	±85	1%	±1	
Marine Corps Officers	563	2%	1,362	±50	0%	±1	
Air Force Enlisted	2,095	9%	49,618	±592	4%	±1	
E1 – E4	1,013	4%	21,753	±424	2%	±1	
Air Force Officers	781	3%	11,928	±359	1%	±1	
MALES	11,239	49%	1,156,394	±7,677	85%	±1	
Army	1,640	7%	463,499	±4,940	34%	±1	
Navy	1,232	5%	256,057	±2,328	19%	±1	
Marine Corps	6,700	29%	176,810	±2,155	13%	±1	
Air Force	1,667	7%	260,029	±5,128	19%	±1	
Enlisted	8,716	38%	961,827	±7,371	71%	±1	
E1 – E4	3,762	17%	501,165	±7,033	37%	±1	
E5 – E9	4,954	22%	460,662	±2,206	34%	±1	
Officers	2,523	11%	194,567	±2,149	14%	±1	
O1 – O3	1,175	5%	102,325	±720	8%	±1	
O4 – O6	866	4%	74,445	±535	5%	±1	
Experienced USC	116	1%	13,912	±3,958	1%	±1	
Not Experienced USC	11,123	49%	1,142,482	±8,521	84%	±1	
Experienced SH	308	1%	47,750	±7,469	4%	±1	
Not Experienced SH	10,931	48%	1,108,645	±10,450	82%	±1	
Deployed Past 12 Months	3,726	16%	386,285	±15,030	29%	±2	
Not Deployed Past 12 Months	7,489	33%	768,029	±15,493	57%	±2	
Army Enlisted	1,236	5%	382,666	±4,375	28%	±1	
E1 – E4	419	2%	206,623	±3,810	15%	±1	
Army Officers	404	2%	80,833	±2,294	6%	±1	
Navy Enlisted	807	4%	213,113	±2,206	16%	±1	
E1 – E4	269	1%	100,196	±2,204	7%	±1	
Navy Officers	425	2%	42,943	±743	3%	±1	
Marine Corps Enlisted	5,358	24%	156,506	±2,154	12%	±1	
E1 – E4	2,528	11%	100,229	±2,141	7%	±1	
Marine Corps Officers	1,342	6%	20,304	±57	1%	±1	
Air Force Enlisted	1,315	6%	209,542	±5,068	15%	±1	
E1 – E4	546	2%	94,117	±5,050	7%	±1	
Air Force Officers	352	2%	50,487	±783	4%	±1	

An example of the tabulated survey responses for 2012 WGRA Question 32, which asks about unwanted sexual contact in the past 12 months, is provided in Table 5. The subpopulations used in this research for all questions of interest are highlighted in Table 5. Other tabulated question response data can be retrieved from the DMDC website: <https://www.dmdc.osd.mil/>.

Table 5. 2012 WGRA Question 32. Unwanted-Sexual-Contact Incident Rate
Tabulated Response Data (from DMDC, 2013b)

32. Unwanted Sexual Contact incident rate: Unwanted Sexual Contact can be defined as having experienced without your consent and against your will forced performance or receipt of sexual touching, (e.g., intentional touching of genitalia, breasts, or buttocks), attempted or completed sexual intercourse, oral sex, anal sex, or penetration by a finger or object.

	Percent Responding		Percentages	Max ME	Unwanted Sexual Contact
			Incident Rate		
TOTAL	100	±0	1.9	±0.4	
Army	100	±0	1.6	±0.6	
Navy	100	±0	3.5	±1.2	
Marine Corps	100	±0	1.7	±0.3	
Air Force	100	±0	1.0	±0.4	
Enlisted	100	±0	2.2	±0.4	
E1 – E4	100	±0	2.9	±0.7	
E1 – E3	100	±0	3.1	±1.0	
E4	100	±0	2.7	±1.1	
E5 – E9	100	±0	1.4	±0.4	
E5 – E6	100	±0	1.6	±0.6	
E7 – E9	100	±0	0.8	±0.7	
Officers	100	±0	0.7	±0.3	
O1 – O3	100	±0	0.8	±0.3	
O4 – O6	100	±0	0.7	±1.0	
Deployed Past 12 Months	100	±0	2.2	±0.7	
Not Deployed Past 12 Months	100	±0	1.8	±0.4	
Non-Hispanic White	100	±0	1.5	±0.5	
Total Minority	100	±0	2.5	±0.6	
Non-Hispanic Black	100	±0	2.8	±1.0	
Hispanic	100	±0	2.1	±1.2	
Experienced USC	100	±0	100.0	±0.0	
Not Experienced USC	100	±0	0.0	±0.0	
Experienced SH	100	±0	17.7	±3.5	
Not Experienced SH	100	±0	0.7	±0.3	
FEMALES	100	±0	6.1	±0.6	
Army	100	±0	7.1	±1.2	
Navy	100	±0	7.2	±1.3	
Marine Corps	100	±0	10.1	±1.0	
Air Force	100	±0	3.1	±1.0	
Enlisted	100	±0	6.8	±0.8	
E1 – E4	100	±0	9.1	±1.2	
E5 – E9	100	±0	3.9	±0.8	
Officers	100	±0	3.0	±0.8	
O1 – O3	100	±0	3.9	±1.1	
O4 – O6	100	±0	0.9	±0.9	
Experienced USC	100	±0	100.0	±0.0	
Not Experienced USC	100	±0	0.0	±0.0	
Experienced SH	100	±0	20.3	±2.1	
Not Experienced SH	100	±0	1.8	±0.4	
Deployed Past 12 Months	100	±0	6.9	±1.3	
Not Deployed Past 12 Months	100	±0	5.8	±0.7	

Table 5 continued. 2012 WGRA Question 32. Unwanted-Sexual-Contact Incident Rate Tabulated Response Data (from DMDC, 2013b)

	Percent Responding	Percentages Incident Rate	Max ME	Unwanted Sexual Contact
Army Enlisted	100 ±0	7.9	±1.5	
E1 – E4	100 ±0	9.9	±2.3	
Army Officers	100 ±0	3.9	±1.7	
Navy Enlisted	100 ±0	8.0	±1.6	
E1 – E4	100 ±0	9.8	±2.3	
Navy Officers	100 ±0	2.6	±1.4	
Marine Corps Enlisted	100 ±0	10.7	±1.1	
E1 – E4	100 ±0	12.4	±1.5	
Marine Corps Officers	100 ±0	4.9	±1.6	
Air Force Enlisted	100 ±0	3.4	±1.2	
E1 – E4	100 ±0	5.7	±2.5	
Air Force Officers	100 ±0	1.9	±1.2	
MALES	100 ±0	1.2	±0.4	
Army	100 ±0	0.8	±0.7	
Navy	100 ±0	2.7	±1.6	
Marine Corps	100 ±0	1.1	±0.4	
Air Force	100 ±0	0.5	±0.5	
Enlisted	100 ±0	1.4	±0.5	
E1 – E4	100 ±0	1.8	±0.9	
E5 – E9	100 ±0	1.0	±0.5	
Officers	100 ±0	0.3	±0.5	
O1 – O3	100 ±0	0.1	±0.2	
O4 – O6	100 ±0	0.7	±1.2	
Experienced USC	100 ±0	NR		
Not Experienced USC	100 ±0	0.0	±0.0	
Experienced SH	100 ±0	15.2	±7.0	
Not Experienced SH	100 ±0	0.6	±0.3	
Deployed Past 12 Months	100 ±0	1.6	±0.8	
Not Deployed Past 12 Months	100 ±0	1.0	±0.6	
Army Enlisted	100 ±0	0.9	±0.8	
E1 – E4	100 ±0	0.9	±1.5	
Army Officers	100 ±0	0.3	±1.5	
Navy Enlisted	100 ±0	3.1	±1.9	
E1 – E4	100 ±0	4.8	±3.8	
Navy Officers	100 ±0	0.7	±1.4	
Marine Corps Enlisted	100 ±0	1.2	±0.4	
E1 – E4	100 ±0	1.3	±0.6	
Marine Corps Officers	100 ±0	0.3	±0.6	
Air Force Enlisted	100 ±0	0.6	±0.7	
E1 – E4	100 ±0	0.9	±1.3	
Air Force Officers	100 ±0	0.0	±0.0	

Note. Percent responding are active duty members who answered the question. Incident rate indicates the percentage of members who had at least one experience of Unwanted Sexual Contact in the 12 months before responding to the survey.
NR: Not reportable

This researcher used tabulated response data from the 2012 survey to estimate certain organizational costs of sexual assault in the U.S. military. Specifically, the survey responses provided necessary data to estimate costs associated with sexual assaults that were not reported to DoD authorities. In addition, 2012 WGRA survey-response data was analyzed to develop estimates for organization costs associated with victims leaving military service and productivity loss as a result of sexual-assault incidents.

2. DoD Annual Report on Sexual Assault in the Military: FY 2012

Each year, the Secretary of Defense is required to submit reports of sexual assaults from the military departments. These reports from the military branches are included as Enclosures 1, 2 and 3 of the *Department of Defense Annual Report on Sexual Assault on the Military: Fiscal Year 2012*. I used data contained in these reports as a primary data set for analysis of organizational costs associated with sexual assault in each of the military departments. Electronic files that were used to generate portions of each of the military branch reports were provided by the DoD Sexual Assault Prevention and Response Office (SAPRO) to conduct this research.

Each of the DoD military departments presented sexual-assault statistics from FY 2012 in a standardized format, along with detailed analysis of the sexual-assault problem facing the department and prevention and response measures being employed. The data used for this research is located in the FY 2012 statistics report of reported sexual assaults for the Navy, Army, Air Force and Marine Corps.

The Navy's FY 2012 sexual assault statistics are provided in Appendix C of this report as an example of the data used for this study. The data for the Army, Air Force and Marine Corps are available from the *Department of Defense Annual Report on Sexual Assault on the Military: Fiscal Year 2012* at the DoD SAPRO website: <http://www.sapr.mil/>.

The sexual assault statistics reports include the following data:

- Summary of FY 2012 unrestricted and restricted sexual assault reports involving service members
- Summary of FY 2012 victims making sexual assault reports involving service members
- FY 2012 unrestricted reports statistics
- Investigations of unrestricted reports of sexual assaulted completed in FY 2012
- Final disposition for subjects in investigations completed in FY 2012
- Victim data for investigations completed in FY 2012
- Courts-martial adjudications and outcomes (sexual assault charge and non-sexual assault offense)

- Nonjudicial punishments imposed (sexual assault charge and non-sexual assault offense)
- Other disciplinary actions taken
- Demographics of victims and subjects for investigations completed in FY 2012
- FY 2012 restricted reports statistics
- FY 2012 support services for victims of sexual assault
- Synopsis of unrestricted sexual assault cases

The reports also contain statistics on reports of sexual assault that occurred in combat areas of interest, which were not analyzed separately in this study.

3. Sexual Assault in the U.S. Coast Guard in FY 2012

As required by public law, the U.S. Coast Guard released a report to Congress on January 30, 2012, detailing sexual assault in the Coast Guard during FY 2012. This report contains summary data for 95 sexual-assault cases for which investigations were opened in FY 2012. The data provides the number of restricted reports received and a breakdown of numbers of victims and subjects in unrestricted investigations initiated in FY 2012. Disposition of unrestricted investigations in FY2012 and investigations from prior years adjudicated in FY 2012 is also included in the report.

Due to the limited nature of the data in the FY 2012 Coast Guard report on sexual assault, detailed analysis was completed using the DoD military services sexual-assault data. The results from the analysis on DoD sexual assaults were used to determine cost estimates for the Coast Guard.

IV. ANALYSIS AND FINDINGS

A. INTRODUCTION

Many elements contribute to the costs to the military of sexual-assault incidents against or perpetrated by active-duty servicemembers. Assumptions for developing cost estimates for each cost element are explained in this chapter, followed by explanations of calculations and formulas used in the estimation process. Results for all elements are displayed at the end of this chapter.

B. BASE CASE ASSUMPTIONS AND DATA ANALYSIS

1. Overall Project Assumptions

The real discount rate used in this research project is 1.1 percent, as per direction given in the Office of Management and Budget (OMB) Circular A-94, Appendix C, which was updated in December 2012.

The FY 2012 DoD composite standard pay and reimbursement rates were used throughout cost-estimate calculations. DoD composite pay rates may be located at <http://comptroller.defense.gov/> and are also provided in Appendix C.

For this research, the FY 2012 DoD civilian personnel fringe rate across all services was assumed to be 30.6 percent. This percentage is an average of the FY 2012 DoD civilian personnel fringe rates for the Navy, Army, Air Force, and Marine Corps as assigned by the Office of the Under Secretary of Defense in a memo dated October 5, 2011. In addition, DoD general schedule (GS) civilian hourly wage rates are assumed to be the average of step 1 through step 10 for each pay grade. GS wages may be retrieved from <https://www.omb.gov>. The GS wage rates used for this study, including the 30.6 percent fringe benefit rate are provide in Appendix C.

The numbers and characteristics (i.e., pay grades) of alleged victims that reported to DoD officials in FY 2012 sexual-assault incidents that occurred before FY 2012 are used to estimate the number of individuals that will report incidents that occurred in FY 2012 in later fiscal years. Similar assumptions are also applied when estimating other cost

elements—for example, legal costs. The cost estimates for courts-martial includes proceedings that occurred in FY 2012 for cases that occurred before FY 2012. It is assumed a similar number of cases will be adjudicated after FY 2012 for incidents that occurred in FY 2012, making all of the cases adjudicated in FY 2012 representative of the proceedings that will occur for incidents in FY 2012.

Unless otherwise stated, cost estimates are based on marginal costs.

2. Overall Project Calculations

a. Calculations Using Data from FY 2012 WGRA Tabular Results

Working with FY 2012 WGRA tabular results, the maximum margin of error (ME) for the aggregated responses of each subpopulation was used to determine the minimum and maximum percentage or mean. For example, the maximum ME is ± 0.4 for the “TOTAL” survey population responses to question 32, the unwanted sexual contact rate as shown in Table 5. The incident rate in percentage for the TOTAL survey population is 1.9. Therefore, to determine the minimum incident rate for the TOTAL survey population, the maximum ME (0.4) was subtracted from the reported incident rate (1.9) for a minimum incident rate of 1.5 percent. Similarly, the maximum incident rate was calculated by adding the maximum ME (0.4) to the reported incident rate (1.9) for a maximum incident rate of 2.3 percent. The estimated incident rate was assumed to equal the reported rate of 1.5 percent.

To determine the projected number of individuals that experienced unwanted sexual contact in FY 2012, the minimum, estimated, and maximum incident rates were multiplied by the estimated service population (\pm maximum ME) shown in Table 4. The resultant numbers of service members projected to have experienced unwanted sexual contact in FY 2012 are shown in Table 6. Only the total population, female and male population, and the subpopulations used for calculations in this research are presented in Table 6.

Table 6. Estimated Number of Service Members in Subpopulations within the DoD Services that Experienced Unwanted Sexual Contact in FY 2012

Subpopulations	Number of Individuals Experiencing USC		
	Minimum	Estimated	Maximum
TOTAL	20,208	25,743	31,339
FEMALES	10,871	12,108	13,354
Army Enlisted	3,633	4,495	5,362
E1–E4	2,578	3,371	4,170
Army Officers	336	602	873
Navy Enlisted	2,728	3,441	4,166
E1–E4	1,942	2,575	3,225
Navy Officers	98	213	329
Marine Corps Enlisted	1,145	1,288	1,435
E1–E4	884	1,016	1,151
Marine Corps Officers	43	67	92
Air Force Enlisted	1,079	1,687	2,310
E1–E4	683	1,240	1,819
Air Force Officers	81	227	381
MALES	9,190	13,877	18,625
Army Enlisted	378	3,444	6,580
E1–E4	0	1,860	5,050
Army Officers	0	242	1,496
Navy Enlisted	2,531	6,607	10,766
E1–E4	980	4,809	8,806
Navy Officers	0	301	917
Marine Corps Enlisted	1,235	1,878	2,539
E1–E4	687	1,303	1,945
Marine Corps Officers	0	61	183
Air Force Enlisted	0	1,257	2,790
E1–E4	0	847	2,182
Air Force Officers	0	0	0

Table 7. presents the estimated number of unwanted-sexual-contact incidents experienced by servicemembers in FY 2012. Table 7. provides an example of figures calculated using FY 2012 WGRA results presented by the DMDC in the *Tabulations of Responses* (2012). In Table 7. and other tables of data or results presented in this research paper, “NR indicates the estimate is Not Reportable and is suppressed because of low reliability. Estimates of low reliability are suppressed based on criteria defined in terms of nominal sample size (less than 5), effective sample size (less than 15), or relative standard error (greater than 0.225)” (Defense Manpower Data Center, 2013b,

p. 15). In addition, “NA indicates the question was Not Applicable because the question did not apply to respondents in the reporting category based on answers to previous questions” (Defense Manpower Data Center, 2013b, p. 15). For calculation purposes, NR and NA reported responses were treated as zeroes by the author.

Table 7. Estimated Number of Unwanted Sexual-Contact Incidents Experienced by Service Members in Subpopulations within the DoD Services in FY 2012

Subpopulations	Number of Incidents of USC		
	Minimum	Estimated	Maximum
TOTAL	54,562	82,377	115,953
FEMALES	27,179	35,113	44,068
Army Enlisted	9,810	14,386	19,839
E1-E4	6,704	10,789	15,848
Army Officers	470	1,264	2,445
Navy Enlisted	6,548	9,979	14,163
E1-E4	4,273	7,210	10,965
Navy Officers	127	469	1,021
Marine Corps Enlisted	2,862	3,608	4,447
E1-E4	2,298	2,947	3,683
Marine Corps Officers	65	120	193
Air Force Enlisted	NR	NR	NR
E1-E4	NR	NR	NR
Air Force Officers	81	363	838
MALES	22,974	48,569	83,813
Army Enlisted	NR	NR	NR
E1-E4	NR	NR	NR
Army Officers	NA	NA	NA
Navy Enlisted	5,315	23,123	52,753
E1-E4	NR	NR	NR
Navy Officers	NR	NR	NR
Marine Corps Enlisted	3,951	7,700	12,693
E1-E4	1,991	5,082	9,531
Marine Corps Officers	NR	NR	NR
Air Force Enlisted	NR	NR	NR
E1-E4	NR	NR	NR
Air Force Officers	NA	NA	NA

b. Calculations Using Data from FY 2012 DoD Sexual Assault Statistics

Unless the data provided in DoD sexual assault statistics for FY 2012 provided a detailed breakout of how many individuals of a specific pay grade were affected by a certain action, composite pay calculations were performed for the low, average, and high-cost estimates using the composite pay-grade groupings of servicemembers displayed in Table 8. To calculate the low estimate, the composite pay of an E1 was multiplied by the percentage of victims or subjects reported in this grouping by the total number of individuals who experienced the event. The demographics of the active-duty victim and subject population for the DoD in FY 2012 are shown in Table 9. and Table 10. An example of this calculation is provided in paragraph 3.a of this chapter.

Table 8. Pay-Grade Groupings of Servicemember Alleged Victims and Subjects of Investigations

Paygrades	Low	Mid	High
E1-E4	E-1	E-2	E-4
E5-E9	E-5	E-7	E-9
WO1-WO5	W-1	W-3	W-5
O1-O3	O-1	O-2	O-3
O4-O10	O-4	O-6	O-10
Cadet/Midshipman	Cadets	Cadets	Cadets
Unknown	E-1	E-8	O-10

Table 9. Victim Pay-Grade Demographics for Sexual-Assault Cases Opened and Completed in FY 2012

Victim Demographics for Cases Opened and Completed in FY12				
Paygrades	Navy	Army	Air Force	Marine Corps
E1-E4	78.32%	83.48%	78.76%	87.79%
E5-E9	17.80%	11.94%	10.88%	10.69%
WO1-WO5	0.32%	0.13%	0.00%	0.00%
O1-O3	3.24%	3.30%	5.18%	1.53%
O4-O10	0.00%	0.13%	0.00%	0.00%
Cadet/Midshipman	0.00%	1.02%	5.18%	0.00%
Unknown	0.32%	0.00%	0.00%	0.00%

Table 10. Subject Pay-Grade Demographics for DoD Sexual-Assault Cases
Opened and Completed in FY 2012

Subject Demographics for Cases Opened and Completed in FY12				
Paygrades	Navy	Army	Air Force	Marine Corps
E1-E4	51.58%	58.81%	63.79%	70.63%
E5-E9	33.33%	34.46%	24.69%	25.63%
WO1-WO5	0.35%	1.04%	0.00%	0.00%
O1-O3	3.51%	4.02%	5.76%	1.88%
O4-O10	1.05%	1.17%	1.23%	0.00%
Cadet/Midshipman	0.35%	0.52%	4.53%	0.00%
Unknown	9.82%	0.00%	0.00%	1.88%

3. Productivity Related Costs Assumptions and Calculations

a. Incident Costs

Incident costs were calculated for sexual-assault incidents that occurred during the workday and accounted for active-duty victim and subject time away from work due to sexual-assault incidents. DoD FY 2012 sexual-assault statistics and 2012 WGRA data were used to calculate incident-related costs.

(1) Assumptions. The assumed duration of sexual-assault incidents for each of the categories of unwanted sexual contact are summarized in Table 11. The incident durations are the same used to estimate the time spent during commission of sexual harassment incidents by Faley and his colleagues in their research (1999). Faley explained in his study that experts on the subject of rape who were contacted regarding how long an assault takes believed the time duration used for rape in Faley's research (1999) was "greatly underestimated." However, without a more accurate estimate of how long it takes to commit a sexual assault, this researcher used the same conservative time durations used by Faley and his colleagues.

Table 11. Estimated Duration of Sexual Assault Behavior (after Faley et al., 1999)

Sexual Assault Behavior	WGRA Question 34 Answer (s)	Estimated Duration
Rape (Art. 120)	c. Forced Intercourse	10 minutes
Aggravated Sexual Assault (Art. 120)	e. Forced Oral Sex, Anal Sex, or Penetration by Finger or Object	10 minutes
Aggravated Sexual Contact (Art. 120)		10 minutes
Abusive Sexual Contact (Art.120)		10 minutes
Wrongful Sexual Contact (Art. 120)	a. Sexual Touching, f. Did Not Specify	0.25 minutes
Non-Consensual Sodomy (Art. 125)		10 minutes
Attempts to Commit Offenses (Art. 80)	b. Attempted Intercourse, d. Attempted Oral or Anal Sex or penetration by Finger or Object	10 minutes

Calculations for reported incidents of sexual assault were performed using data from FY 2012 DoD sexual-assault statistics. Data in the *DoD Annual Report on Sexual Assault on the Military: Fiscal Year 2012* did not provide the number of reported cases of sexual assault that occurred during the business day. Instead, they provided discrete data, including the number of incidents on base or post, the number of incidents that occurred from 6 am to 6 pm, and the number of incidents that occurred on specific days of the week. The researcher assumed the number of incidents that occurred during the workday was the lesser of the number of unrestricted reports of sexual assault occurring:

- On a military installation
- Between the hours of 6 am and 6 pm
- On a weekday (Monday through Friday)

Calculations for unreported incidents of sexual assault were performed using data from the FY 2012 WGRA tabulation of results. The types of unwanted sexual assaults experienced by respondents were determined by tabulated responses to Question 34 “What did the person(s) do in the situation?” (Defense Manpower Data Center, 2013b, p. 566). The offered responses are linked to the sexual assault behaviors and estimate incident durations presented in Table 11. The numbers of unreported sexual-assault incidents occurring during the workday were estimated based

on all tabulated responses for Question 35, which asked where the most serious incident of unwanted sexual contact occurred. Estimated numbers of incidents that occurred during the workday were calculated based only on the tabulated responses for answer b) during the work day.

In addition, to calculate incidents costs of unreported of sexual assault, the researcher used FY 2012 WGRA tabulated responses from Question 38, “Was the offender(s)...a. Someone in your chain of command?” ((Defense Manpower Data Center, 2013b, p. 567), which referred to the offenders’ position in relation to the victim, to estimate the rank of active-duty alleged perpetrators of sexual assaults on active-duty members. There was no direct linkage between Question 38 response choices and active-duty subjects’ pay grades, thus the researcher linked Question 38 responses to the rank of the respondents. Respondents who answered “a. Someone in your chain of command” were not included in calculations because it was not clear that the individuals being referred to were active duty. The researcher assumed respondents who answered “b. Other military person(s) of higher rank/grade who was not in your chain of command?” had an alleged perpetrator that was one pay grade higher in rank than the respondent. The researcher assumed respondents who answered “c. Your military coworker(s)?” or “e. Other military person(s)?” had an alleged perpetrator that was of equal rank. If the respondent answered, “d. Your military subordinate(s)?” the researcher assumed the alleged perpetrator was one pay grade lower in rank than the respondent. Lastly, if the response to Question 38 was f through j, the alleged perpetrator was assumed be not active-duty military.

Finally, incident costs assumed only one alleged perpetrator per incident when there was a report, or response on the WGRA, indicating an active-duty service member was the alleged perpetrator of the sexual assault. This assumption is conservative, as both DoD sexual assault statistics and WGRA results present data indicating that there are multiple alleged perpetrators in a small percentage of sexual assaults in the military.

(2) Calculations. The following basic formula was used to estimate incident costs related to sexual assaults in which an alleged victim either reported the incident to DoD officials or responded on the 2012 WGRA survey as being sexually assaulted within the past twelve months. Faley (1999) used a similar formula to estimate incident costs in his research.

$$I = \sum_{i=1}^n t_i (CompositePay_v + CompositePay_s) \quad (1)$$

where I = estimated total incident costs occurring in FY 2012

i = service member who reported to DoD officials or responded on WGRA survey being sexual assaulted

t = time elapsed during incident

v = alleged victim of sexual assault

s = subject of sexual assault investigation or alleged perpetrator of sexual assault

Incident costs were calculated using variations of Equation (1). The number of unrestricted reports of sexual-assault incidents that may have occurred during the duty day are categorized by type of offense in Table 12. To determine the lowest estimate of incident costs, the composite pay of alleged victims and subjects were calculated by summing the composite pay of the low pay grade in each range shown in Table 8. multiplied by the percentage of victims and subjects in each of the pay grade range shown in tables 9 and 10, respectively. To determine the average and high estimates of incident costs, the author completed the same calculations described above, using the mid and high of pay-grade groupings provided in Table 12.

As an example, for the minimum incident-cost estimate for the Navy for incidents of rape, the calculation would be as follows:

$$I_{\text{minimum}} = 10 \frac{\text{min}}{\text{incident}} * \frac{1 \text{ hour}}{60 \text{ min}} * 74 \text{ incidents} * \left[\begin{aligned} & \left(\frac{\text{E1CompositePay}}{\text{hour}} * .78 + \frac{\text{E5CompositePay}}{\text{hour}} * .18 \right. \\ & + \frac{\text{W1CompositePay}}{\text{hour}} * .003 + \frac{\text{O1CompositePay}}{\text{hour}} * .03 \\ & + \frac{\text{O4CompositePay}}{\text{hour}} * 0 + \frac{\text{CadetCompositePay}}{\text{hour}} * 0 \\ & \left. + \frac{\text{E1CompositePay}}{\text{hour}} * .003 \right) \\ & + \left(\frac{\text{E1CompositePay}}{\text{hour}} * .52 + \frac{\text{E5CompositePay}}{\text{hour}} * .33 \right. \\ & + \frac{\text{W1CompositePay}}{\text{hour}} * .003 + \frac{\text{O1CompositePay}}{\text{hour}} * .01 \\ & + \frac{\text{O4CompositePay}}{\text{hour}} * .10 + \frac{\text{CadetCompositePay}}{\text{hour}} * 0 \\ & \left. + \frac{\text{E1CompositePay}}{\text{hour}} * .003 \right) \end{aligned} \right] \quad (1)$$

Table 12. Estimated Number of Unrestricted Reports of Sexual-Assault Incidents that Occurred During the Duty Day in FY 2012 and were Reported in FY 2012

Offense	Number of Incidents				
	Navy	Army	Air Force	Marine Corps	DoD
Rape (Art. 120)	74	107	50	51	282
Aggravated Sexual Assault (Art. 120)	84	186	27	75	372
Aggravated Sexual Contact (Art. 120)	7	18	8	13	46
Abusive Sexual Contact (Art.120)	46	98	5	25	174
Wrongful Sexual Contact (Art. 120)	55	171	30	21	277
Non-Consensual Sodomy (Art. 125)	16	39	2	14	71
Attempts to Commit Offenses (Art. 80)	5	0	0	1	6
Total	287	619	122	200	1228

Details about the alleged victims or incidents are not revealed to DoD officials for restricted reports of sexual assault, so the incident costs for restricted reports of sexual assault were estimated by multiplying the average cost per incident by the number of unrestricted incidents. Table 13 provides a summary of the numbers of restricted sexual assaults in FY 2012.

Table 13. Estimated Number of Restricted Reports of Sexual-Assault Incidents that Occurred During the Duty Day in FY 2012 and were Reported in FY 2012

Navy	Army	Number of Incidents			DoD
		Air Force	Marine Corps		
85	66	90	22		263

Incident costs for all projected sexual assaults were calculated using data from the FY 2012 WGRA tabulated results, Equation (1), and stated assumptions. Costs for reported incidents of sexual assaults were subtracted from total incident costs for all projected sexual assaults to avoid a double counting error. This resulted in the incident costs for unreported sexual assaults in the military during FY 2012.

b. Absenteeism Costs

(1) Assumptions. There was no statistical data from DoD or WGRA data available accounting for absenteeism resulting from sexual-assault incidents. However, previous studies suggest some victims do take time off from work as a result of the assaults. For example, the paper *Costs of Intimate Partner Violence Against Women in the United States* presented results from the National Violence Against Women Survey that indicated 21.5% of intimate-partner rape victims missed an average of 8.1 days of paid work per incident (National Center for Injury Prevention and Control, 2003). For this research, the author assumed 20% of rape victims were absent for work for 8.1 days. The researcher includes the following incidents as rape for purposes of this research: individuals experiencing incidents of forced or attempted intercourse and forced or attempted incidents of oral sex, anal sex or penetration by finger or other object. These unwanted sexual contact incident types relate to answers b through e to Question 34 on the WGRA survey and closely mirror the categories of unwanted sexual contact that fit the definition of rape used by Department of Health and Human Services in their study in 2003.

(2) Calculations. The following formula was used to estimate absenteeism costs related to sexual assaults for reported and unreported incidents.

$$A = \sum_{i=1}^n t_i (CompositePay_v) * D_A \quad (1)$$

Where A = estimated total absenteeism costs

i = service member who reported to DoD officials or responded on WGRA survey being sexual assaulted

t = time victim was absent from work due to a sexual assault (8.1 days)

v = alleged victim of sexual assault

D_A = discount factor for sexual assault victims being absent from work (20%)

c. Productivity-Reduction Costs

Productivity-reduction related costs were calculated using 2012 WGRA responses to Question 44(c): “As a result of this situation [unwanted sexual contact within the past 12 months], to what extent did your work performance decrease?” (Defense Manpower Data Center, 2013b, p. 567). Survey respondents could choose from the following answers: Not at all, small extent, moderate extent, large extent, and very large extent. Translating these descriptive answers into a quantitative productivity decrease was necessary to calculate a cost of decreased productivity associated with sexual-assault incidents.

(1) Assumptions. Table 14 compares Question 44 answer choices for the 2012 WGRA survey and the answer choices to similar question in the 2006 survey and designates the range of work performance decrease assigned for this research.

Table 14. Productivity Reduction Percentages from 2012 WGRA Survey
(after Faley et al., 1999)

Verbiage in 2012 WGRA Survey	Verbiage used in 2006 WGRA Survey*	Minimum	Maximum	Middle of Range
Not at all	My productivity was not affected	0%	0%	0%
Small Extent	My productivity was slightly reduced (10% or less)	0%	10%	5%
Moderate Extent	My productivity was noticeably reduced (11% - 25%)	11%	25%	18%
Large Extent	My productivity was markedly reduced (26% - 50%)	26%	50%	38%
Very Large Extent	My productivity was dramatically reduced (more than 50%)	50%	or greater	50%
*There was a category in the 2006 survey “don’t know/can’t judge” that was not used in the 2012 WGRA survey.				

The WGRA survey question did not seek information regarding the duration of work-productivity decrease due to sexual-assault incidents. However, research shows that the mental health impacts from sexual assault vary greatly among individuals and effects vary in duration. Victims may suffer lifelong consequences from the incident(s) they experienced. “Many victims experience a constellation of acute stress symptoms, including anxiety, disorganized thoughts and memory, nausea, hypervigilance, and numbing or dislocation that may make them fear that they are going crazy” (Farris, Schell, & Tanielian, 2013, p. 14). For some victims, these acute symptoms may subside soon after the incident.

For others, there may be extenuating circumstances that complicate or extend the trauma. For example, if a woman reports a rape to her commander but she is not believed, she may experience a secondary victimization from the commander’s actions. Her response to cope with the trauma may be very different from that of a woman who is believed, supported, and offered counseling after a rape. (Nelson, 2002, p. 195)

Many victims of sexual assault suffer post-traumatic stress disorder (PTSD) after the attack. A study completed by Barbra Rothbaum and colleagues in 1992 found that 94 percent of women studied within two weeks of the sexual-assault incidents met the diagnostic criteria for PTSD. Over time, the percentage of women displaying symptoms of PTSD decreased, with 47 percent of women meeting the diagnostic criteria for PTSD three months after the assault incident (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992).

In an attempt to determine how productivity is negatively impacted over time after a sexual assault, I reviewed several studies, including the research by Farris and colleagues (2013), Nelson (2002), and Rothbaum and colleagues (1992) described in the previous paragraphs. I was unable to locate a study that provided a model of the typical implication to productivity after sexual-assault incidents within research time constraints. Therefore, I developed a schema to estimate degradation of productivity decreases based on general timeframes for recovery from or coping with sexual-assault incidents. When calculating the minimum cost estimate, I assumed the productivity decrease would last for three months, starting with the respondents' reported percentage productivity reduction at time zero and linearly tapering off to zero percentage productivity reduction after three months. To calculate maximum cost estimates from productivity reduction, I again assumed productivity degradation would be linear, but continued for three years instead of three months. The average cost estimates for productivity reduction was calculated by averaging the minimum and maximum productivity reduction timeframes, to get 1.63 years.

(2) Calculations. The following formula was used to estimate productivity reduction costs related to sexual assaults for incidents of sexual assault that are projected to have occurred in the DoD during FY 2012 based on tabulated results from the 2012 WGRA survey. The formula does not take into account a subtraction made to account for number of individuals projected to depart the service due to sexual-assault incidents that occurred in FY 2012.

$$PD = \sum_{p=1}^n p_i * \frac{t}{2} (CompositePay_v) \quad (2)$$

Where PD = estimated total productivity reduction costs

i = service member responded on WGRA survey as being sexual assaulted

p = percent productivity decrease due to a sexual assault

t = duration of productivity reduction

v = alleged victim of sexual assault

4. Administrative Costs Assumptions and Calculations

a. Separation and Replacement Costs

Separation and replacement costs for victims were calculated according to 2012 WGRA responses for Question 44(b): “As a result of this situation [unwanted sexual contact within the last 12 months], to what extent did you think about getting out of your Service?” (Defense Manpower Data Center, 2013b, p. 567). Survey respondents could choose from not at all, small extent, moderate extent, large extent, and very large extent. The 2012 WGRA survey did not ask respondents directly about their intention to depart active duty, only to what extent they thought about departing; therefore, the survey did not provide solid data on how many individuals intended to separate or how many people actually did separate from the service. Likewise, DoD statistics do not provide data on victim turnover as a result of sexual-assault incidents.

Table 15. Number of Victims of Sexual-Assault Incidents that Occurred in FY 2012 Projected to Leave Military Service

Paygrade		Navy			Army			Air Force			Marine Corps			DoD*		
Min	Max	Min	Est	Max	Min	Est	Max	Min	Est	Max	Min	Est	Max	Min	Est	Max
E-1	E-4	77	306	662	111	437	901	7	121	360	60	163	349	256	1,026	2,271
E-5	E-9	31	66	88	124	178	219	16	74	155	22	28	33	193	345	495
O-1	O-3	0	0	0	0	0	0	0	0	0	0	4	16	0	84	246

DoD sexual-assault data (2013b) does provide ample data on subjects of cases involving sexual assault that leave the military services through resignation or discharge. Some subjects resign or are discharged as a result of charges other than sexual assault, but the charges were brought resulting from reported cases. All subjects that resigned or were discharged because they were subjects of sexual-assault cases, even if a sexual-assault charge was not the final reason for the action, are part of the cost estimates for this research.

Table 16. Number of Subjects Discharged or Resigned Due to Sexual Assault or Sexual Assault-Related Charge (after DoD, 2013b)

Pay Grade	Navy	Army	Air Force	Marine Corps	Totals
Cadets	0	2	0	0	2
E-1	5	30	0	2	37
E-2	9	37	1	2	49
E-3	20	42	8	9	79
E-4	9	94	1	14	118
E-5	2	49	13	8	72
E-6	3	25	0	6	34
E-7	0	16	1	3	20
E-8	1	6	0	0	7
E-9	0	0	0	0	0
O-1	0	0	0	0	0
O-2	0	2	0	0	2
O-3	0	4	0	1	5
O-4	0	5	0	0	5
O-5	0	0	0	0	0
O-6	0	0	0	0	0
W-1	0	0	0	0	0
W-2	0	0	0	1	1
W-3	0	0	0	0	0
Total	49	312	24	46	431

(1) Assumptions. The author estimated the numbers of victims with intent to separate from their services by counting all WGRA respondents who answered that they thought about getting out of their services a large extent or a very large extent, due to one or more unwanted sexual-contact incidents. However, researchers have found that intent to quit does not indicate actual departure from jobs (Hinrichs, 1991; (Lee, Mitchell, Holtom, McDaneil, & Hill, 1999). For instance, a young enlisted member may intend to leave her service due to a sexual-assault incident, but she may have signed an enlistment contract limiting her ability to leave. Also, servicemembers may intend to depart their services, but may not be able to find alternative employment that would provide them the freedom to quit. To account for the difference between the intent to quit and actual turnover, a discount factor was assumed. In alignment with earlier research done by Faley (1999) and Hinrichs (1991), the author used a discount

factor of 0.36. This discount factor represents the 36 percent of individuals who actually leave the workplace after indicating they intend to leave on a survey (Hinrichs, 1991).

Administrative costs estimates do not include costs of administrative separation boards or courts-martial resulting in discharge. These costs are accounted for in the legal-cost estimates. However, the administrative costs for those victims resigning as a result of a sexual assault or subjects resigning or being discharged in lieu of courts-martial are estimated to be \$1,250 per individual. This estimate is based upon findings in a U.S. Government Accountability Office (GAO) document reporting costs associated with discharging individuals in the DoD under the DoD's homosexual-conduct policy (United States Government Accountability Office, 2011).

In an NPS thesis by Freddy A. Morales entitled "Analyzing Benefits of Extending the PCS Tempo in the Marine Corps," Morales calculated the average permanent-change-of-station (PCS) move costs the Marine Corps \$4,076 in 2010 dollars (2011). He did this by summing the normalized costs of transfers over a ten-year period and dividing this summation by the total number of Marine Corps personnel transfers over this same time (Morales, 2011). The author used \$4,700 in FY 2012 dollars as the cost of transferring a member back to his home of record after resignation or discharge for all military services.

A study conducted by the RAND Corporation in 2008 calculated the marginal cost of a low-quality U.S. Army recruit was \$3,300 and the marginal cost of a high-quality recruit was \$5,300 in 2008 (Dertouzos & Garber, 2008). In the GAO's report on costs associated with implementing the DoD's homosexual conduct policy, the agency reported marginal recruiting costs as low \$1,530 per recruit for the Marine Corps to \$8,075 for the Air Force in 2009 (United States Government Accountability Office, 2011). The author assumed the marginal costs for low, average, and high-quality recruits are \$4,300, \$7,100, and \$9,900, respectively, in 2012 dollars.

Replacement costs include training new service members to essentially replace those who departed the service due to sexual-assault incidents.

Separate assumptions were made by the author for training costs of enlisted and officer servicemembers because the groups' training regimens are extremely different.

For enlisted members, the author assumed that each replacement service member would complete boot camp and initial skills training. Estimates for costs per DoD service were derived from cost estimates presented in an unpublished paper by John Enns entitled, "Cost of Attrition: Army and Navy Results for FY2008" (2012) and the GAO's report on implementing the DoD's homosexual-conduct policy. Enns reported that Army and Navy basic training plus initial skills training had marginal costs of \$35,150 and \$41,100 in 2008 dollars (2012). For this study, the costs of Army and Navy training in 2012 dollars are \$46,000 and \$53,500. According to figures provided by the GAO, the average marginal cost of basic training plus initial-skills training per active-duty enlisted member in the DoD in 2009 was \$45,134 (2011). The average DoD training cost was adjusted into 2012 dollars, \$55,250, and was used as the estimated training cost of enlisted members in the Air Force and Marine Corps.

To estimate the training costs of replacements for the officer corps, several assumptions were made. For the low cost estimates, it was assumed the accession program for the officers was OCS and the officers did not attend any formal training programs. For the average cost estimate, it was assumed the accession program for the officers was ROTC and the officers attended junior surface warfare officer (SWO) pipeline training. For the maximum cost estimate, it was assumed the accession point for the officers was the U.S. Naval Academy and the officers attended basic pilot training. The training cost estimates are all based on the marginal costs and were assumed to be the same across all services.

Michael A. Strano determined the marginal costs of commissioning officers in his thesis, "A Comparison of the marginal cost of commissioning officers through the U.S. Naval Academy, Naval Reserve Officers Training Corps, and Officer Candidate School" (1990). The author used Strano's estimates as the basis for the marginal cost of officer accession programs. For estimating the cost of junior SWO pipeline training, the author used Michael D. Makee's estimations from his Naval Postgraduate School thesis entitled, "Training costs for Junior Surface

Warfare Officers” (1999). In GAO’s 1999 report to Congress entitled “Military Personnel: Actions Needed to Better Define Pilot Requirements and Promote Retention,” the GAO indicates basic pilot training costs the DoD \$1,000,000 per pilot (United States General Accounting Office, 1999). The author assumed the marginal cost of the basic pilot training program is 50% of the full cost of the program, which estimates the marginal cost of this program to be \$500,000 in 1999. Table 17 details the costs assigned to the low, average, and high training cost estimates.

Table 17. Officer Training Costs

Officer Training Costs	Minimum	Average	Maximum
Accession Program	OCS	NROTC	USNA
Marginal Cost of Accession Program	\$36,400	\$152,700	\$269,700
Career Field Training	None	Junior SWO	Basic Pilot
Marginal Cost of Officer Training	\$0	\$96,600	\$ 1,204,900

(2) Calculations. The following formula was used to estimate separation and replacement costs.

$$SR = \sum_{i=1}^n (a_i + m_i + r_i + t_i) \quad (2)$$

where SR = estimated total separation and replacement related costs
 i = service member who leaves or is projected to leave their service due to a sexual-assault incident
 a = estimated administrative costs related to member separating
 m = estimated move and travel costs for separating member
 r = estimated recruiting costs associated with replacing members that leave or are projected to leave their service due to a sexual-assault incident
 t = estimated training costs associated with replacing members that leave or are projected to leave their service due to a sexual-assault incident

b. Emergency Transfer Costs

The numbers of sexual-assault-related emergency-transfer requests and subsequent request denials in the military services within the DoD in FY 2012 are reported in the DoD annual report on sexual assault (2013b). These figures were used to calculate the estimated cost of emergency transfers.

(1) Assumptions. The author used the same estimated average cost per move as is used in the separations and replacements calculation: \$4,700. In addition, it was assumed that 2012 dislocation allowance (DLA) would also be paid to victims that PCS through an emergency-transfer request. DLA rates vary per pay grade and were obtained from <http://usmilitary.about.com>.

(2) Calculations.

$$ET = \sum_{i=1}^n m_i + DLA_i \quad (2)$$

where ET = estimated total emergency transfer related costs

i = service member who is granted an emergency transfer due to a sexual assault incident

m = estimated move and travel costs for emergency transfers

DLA = estimated dislocation allowance for PCS of service member

5. Other Costs Assumptions and Calculations

a. Medical and Mental Health Costs

(1) Assumptions. This researcher assumed there were no medical or mental health costs to the military related to unreported incidents of sexual assault. In addition, this research does not include long-term healthcare costs resulting from sexual assaults, including treatment for PTSD. Both these assumptions lead to an underestimation of the aggregate medical and mental care costs associated with sexual assaults in the military.

This researcher turned to previous research on the cost of sexual assault to estimate the cost of medical and mental health care. Coreen Farris and her colleagues in a study for RAND reported “[I]n the civilian sector, the average immediate medical cost for those who seek care is \$2,084” and mental health cost for victims of sexual assault for those who seek care has an average cost of \$978 (Farris et al., 2013, p. 5). In 2012 dollars, the average cost of medical and mental healthcare due to sexual assault is approximately \$3,860 and \$1,750, respectively. In addition, the assumed cost of a sexual-assault forensics evidence (SAFE) kit was \$800 in 2008 (Wyatt, 2008), which is approximately \$1,470 in 2012 dollars.

Table 18 represents the number of individuals referred for medical and mental healthcare for sexual assaults that occurred in FY2012. The numbers of cases where SAFEs were conducted are also included in Table 18.

Table 18. Numbers of Individuals Referred for Medical or Mental Health Care and Numbers of SAFEs Conducted as a Result of Sexual Assaults in the DoD in FY 2012 (after DoD, 2013a)

Unrestricted Cases	Navy	Army	Air Force	Marines	DoD
Medical Referrals to Military Resources	270	412	151	290	1123
Medical Referrals to Civilian Resources	75	47	60	86	268
Mental Health Referrals to Military Resources	343	349	325	325	1342
Mental Health Referrals to Military Resources	116	53	122	115	406
Unrestricted Cases where SAFEs were conducted	10	168	77	84	339
Restricted Cases	Navy	Army	Air Force	Marines	DoD
Medical Referrals to Military Resources	92	153	201	50	496
Medical Referrals to Civilian Resources	24	3	51	1	79
Mental Health Referrals to Military Resources	114	117	294	79	604
Mental Health Referrals to Military Resources	70	13	87	5	175
# Restricted Cases where SAFEs were conducted	17	38	54	11	120

Table 19 lists the minimum and maximum number of hours spent in medical or mental healthcare as a result of sexual assault. These numbers were estimated based on conversations with Navy and Army SARCs and victim advocates.

Table 19. Assumed Minimum and Maximum Medical and Mental Health Care Appointment Duration Plus Travel Time for Victim and SARC or Victim Advocate Resulting from Sexual-Assault Incidents

Sexual assault forensic evidence (SAFE) kit	Time/Report (Hours)	
	Minimum	Maximum
Victim	2	6
SARC or Victim Advocate	2	6
Other Medical Care Related to Sexual Assault	Minimum	Maximum
Victim	2	4
Mental Health Care	Minimum	Maximum
Victim	2	12

The researcher's assumptions for the lowest, middle, and highest pay grade for SARCs and VAs are specified in Table 20.

Table 20. Assumed Low, Mid, and High Pay Grades for SARCs and VAs

Initial Report Participants	Lowest Paygrade	Mid Paygrade	Highest Paygrade
SARC	GS-10	E-6	GS-13
Victim Advocate	E-4	GS-9	E-7

For minimum medical care and mental health care cost estimates, this researcher assumed only costs and minimum times related to SAFEs that were conducted were relevant. Table 18 summarizes the number of referrals made to victims for medical and mental healthcare. The minimum cost estimate assumes that none of the victims acted on referrals received. In addition, the lowest pay grade of the SARC and VA was assumed. To calculate maximum medical care and mental health costs, it was assumed that all the victims that were referred for care received medical or mental health care for the maximum duration listed in Table 19. The highest pay grade for the SARC and VA was assumed for the highest health care cost estimates. For the typical or average cost estimate relating to medical and mental healthcare, the minimum and maximum cost estimates were averaged.

(2) Calculations. The following basic formula was used to estimate medical and mental health costs related sexual assaults in which an alleged victim reported the incident to DoD officials.

$$M = \sum_{i=1}^n ta_i (CompositePay_v + CompositePay_{VA}) + t_i (CompositePay_v) + Med_{DC} + MH_{DC} \quad (2)$$

where M = estimated total medical and mental health related costs

i = service member who used medical services after being sexually assaulted

ta = time elapsed during medical accompanied medical or mental health visits

t = time elapsed during medical unaccompanied medical or mental health visits

v = alleged victim of sexual assault

VA = victim advocate or SARC

Med_{DC} = Direct Medical Care Costs

MH_{DC} = Direct Mental Health Care Costs

b. Victim Support Costs

Interviews were conducted with VAs and SARCs from the Army this[is something missing?] (S. Schafer, personal communication, August 5, 2013) and Navy (H.

Ruppert, personal communication, July 25, 2013 and A. Dunn, personal communication, July 30, 2013) to fully understand victim-support services provided in the military. For this research project, victim-support costs include costs associated with initial reporting of sexual-assault incidents and command-level monthly case reviews. At the initial reporting meeting, sexual-assault victims typically meet with a SARC or VA to make arrangements for immediate or follow-up medical and mental healthcare, to discuss reporting options, to fill out a DD Form 2910 victim preference reporting statement, and to ensure victims are getting the support they need. To verify cases are being handled properly and victims are continuing to receive the necessary level of support from within the command, commands hold a monthly status meeting to discuss open cases. While support services provided in unrestricted reported cases may be discussed in detail at these meetings, details of restricted reported cases are not shared with members of the command.

Other victim support costs are captured in medical and mental healthcare, investigative, and legal costs. Victim support costs only apply to unrestricted and restricted reports of sexual-assault incidents.

(1) Assumptions. The number of victims in the DoD making reports of sexual assaults in FY 2012 are listed in Table 21. The researcher used the number of service member victims and non-service member victims when calculating the cost estimates of the SARC and VAs time spent on initial reports. However, only the numbers of service member victims were used to calculate the cost estimates relating to the victim, because there are no monetary costs to DoD for non-service member victims' time spent in the initial reporting meeting.

Table 21. The Number of Victims in DoD Making Reports of Sexual Assaults in FY 2012

	Navy	Army	Air Force	Marines	DoD
# Total victims initially making Unrestricted Reports in FY12	556	1398	483	351	2788
# of Service Member Victims in Unrestricted Reports Made During FY12	480	1104	334	248	2166
# of Non-Service Member Victims in Unrestricted Reports Made During FY12	76	294	149	103	622
# Total victims initially making Restricted Reports in FY12	246	227	399	109	981
# Service Member victims making Restricted Reports	240	226	380	104	950
# Non-Service Member Victims making Restricted Report involving a Service Member Subject	6	1	19	5	31

Durations of initial reporting meetings vary significantly, depending upon many variables, including the complexity of the sexual-assault incident and the mental state of the victim at the time of the meeting. Table 22 defines the assumed minimum, average, and maximum times for the initial reporting meetings.

Table 22. Assumed Durations for Initial Reporting Meeting

Initial Report Participants	Time/Report (Hours)		
	Minimum	Average	Maximum
Victim	1	2.5	4
SARC or Victim Advocate	1	2.5	4

Table 23 provides a generic listing of the participants at monthly command meetings held to discuss the status of sexual-assault cases and support of victims. These positions and ranks are understood not to be representative of commands throughout the DoD, but they are used to approximate who might attend these command meetings and their associated rank. It is also assumed that each open case is discussed for an average of ten minutes per month at command meetings.

Table 23. List of Positions in Monthly Command Meetings

Unrestricted Reports Meeting Participants	Estimated Paygrade
Installation Commander	O-6
Battalion Commander	O-5
Chaplain	O-5
Legal Office Representative	O-3
Sexual Assault Response Coordinator	E-7
Medical Representative	GS-13
Mental Health Representative	GS-13
Sexual Assault Service Advocate	GS-11
Restricted Reports Meeting Participants	Estimated Paygrade
Chaplain	O-5
Sexual Assault Response Coordinator	E-7
Medical Representative	GS-13
Mental Health Representative	GS-13
Sexual Assault Service Advocate	GS-11

(2) Calculations. The following basic formula was used to estimate victim-support-service costs related to sexual assaults in which an alleged victim reported the incident to DoD officials.

$$VS = \sum_{i=1}^n tr_i(CompositePay_v + CompositePay_{VA}) + tm_i(CompositePay_{CS}) \quad (2)$$

where VS = estimated total victim support related costs
 i = service member who reported a sexual-assault incident to DoD officials
 tr = time elapsed during initial reporting meeting
 tm = time elapsed during command staff meeting
 v = alleged victim of sexual assault
 VA = victim advocate or SARC
 CS = Command Staff Meeting Participants

c. Investigative Costs

An interview was conducted with a special agent (SA) from the Army Criminal Investigation Command (CID) to better understand the role of military investigative commands in reported sexual-assault incidents (J. Takagaki, personal communication, August 23, 2013). During this interview, SA Takagaki discussed how Army CID handles sexual-assault cases from beginning to end. Due to the nature of the crime of sexual assault, each sexual assault case is unique and it was challenging to attempt to generalize data to fit all cases. CID tracks time spent on various aspects of

investigations; however, this data was not accessed for this research, due to time constraints. Future researchers may wish to access actual time records associated with cases to develop precise cost estimates of the investigative process for specific cases worked by CID.

(1) Assumptions. The researcher made the following assumptions regarding the investigatory process of sexual-assault cases in the military:

- 25% of unrestricted reports of sexual assault require crime scene forensics evaluation and analysis.
- Administrative action for each case adds 25% additional time spent on case work. Administrative actions include miscellaneous administrative actions and driving to and from interviews, crime scenes, meetings and briefings.
- All military branch investigative units conduct investigations of sexual assault cases in a similar manner to Army CID.
- Witness ranks mirrored the makeup of the FY 2012 sexual-assault victim and subject populations.
- Direct costs for evidence processing were ignored for this research project.
- Investigative cost estimates were based on an Army CID force structure. Other military investigative services are staffed differently from Army CID, which is not taken into account in this research project.

In addition, Table 24 provides a summary of the various phases of a sexual-assault investigation, who is involved in each phase, and a range of duration for each phase.

Table 24. Summary of Phases of Investigation Process of Sexual Assault Cases in the U.S. Military Services

Indirect Investigative Costs	Who is involved in the Investigative Process?						Minimum Time Spent on Work Item		Typical Time Spent on Work Item		Maximum Time Spent on Work Item	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Highest Paygrade (Air Force)	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Initial Case Review	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	1	0.25	1	0.5	1	1
Initial Victim Interview	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	1	0.17	1	2	1	5
	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	2	1	5
	Victim	Case Dependent	Use Victim Distribution				1	0.17	1	2	1	5
Follow-On Victim Interview(s)	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	0.5	1	2
	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	0.5	1	2
	Victim	Case Dependent	Use Victim Distribution				0	0	1	0.5	1	2
Crime Scene Analysis and Report	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	1	1.25	1	3.5	2	5
	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	3.5	2	5
Witness Interview(s)	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	1	0.17	1	1.5	1	3
	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	1.5	1	3
	Witness	Case Dependent	Use Victim Distribution				1	0.17	1	1.5	1	3
	Witness	Case Dependent	Use Victim Distribution				0	0	1	1.5	1	3
	Witness	Case Dependent	Use Victim Distribution				0	0	0	0	1	3
	Witness	Case Dependent	Use Victim Distribution				0	0	0	0	1	3
	Witness	Case Dependent	Use Subject Distribution				0	0	1	1.5	1	3
	Witness	Case Dependent	Use Subject Distribution				0	0	0	0	1	3
	Witness	Case Dependent	Use Subject Distribution				0	0	0	0	1	3
Initial Subject Interview	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	1	1	1	2	1	4
	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	2	1	4
	Subject	Case Dependent	Use Subject Distribution				1	1	1	2	1	4
Follow-On Subject Interview(s)	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	1	1	2
	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	0	0	1	1	1	2
	Subject	Case Dependent	Use Subject Distribution				0	0	1	1	1	2
Legal and/or Command Briefing(s)	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	2	0.5	3	1	3	2
	SJA (or SJA Legal Officer)	Military	O-2	O-3	O-6	O-6	2	0.5	2	1	3	2
	Command Representative	Military	O-2	O-3	O-6	O-6	1	0.5	1	1	3	2
Attend Trial as Witness	Investigative Service Agent	Military/Civilian	E-5	E-6	W-2	E-7	1	8	2	8	4	8
Administrative Work	Investigative Service Agent	Military/Civilian	E-5	E-6	W-3	E-8	25% of Investigative Service Time		25% of Investigative Service Time		25% of Investigative Service Time	

(2) Calculations. The following basic formula was used to estimate investigative service costs related to sexual assaults in which an alleged victim reported the incident to DoD officials.

$$\begin{aligned}
INV = & \sum_{i=1}^n t_{icr}_i (CompositePay_{ISA}) + t_{ivi}_i (CompositePay_{ISA1} + CompositePay_{ISA2} + CompositePay_v) \\
& + t_{fvi}_i (CompositePay_{ISA1} + CompositePay_{ISA2} + CompositePay_v) \\
& + t_{csa}_i (CompositePay_{ISA1} + CompositePay_{ISA2}) \\
& + t_{wi}_i (CompositePay_{ISA1} + CompositePay_{ISA2} + CompositePay_{w1} + CompositePay_{w2} + \dots) \\
& + t_{si}_i (CompositePay_{ISA1} + CompositePay_{ISA2} + CompositePay_s) \\
& + t_{fsi}_i (CompositePay_{ISA1} + CompositePay_{ISA2} + CompositePay_s) \\
& + t_b_i (CompositePay_{ISA1} + CompositePay_{SJA} + CompositePay_{CS}) \\
& + (t_t_i + t_a_i)(CompositePay_{ISA})
\end{aligned} \tag{2}$$

where INV = estimated total investigative service related costs

i = service member who had a sexual-assault incident investigated

t_{icr} = time elapsed during initial case review

t_{ivi} = time elapsed during initial victim interview

t_{fvi} = time elapsed during follow-up victim interview

t_{csa} = time elapsed during crime scene analysis and reporting

t_{wi} = time elapsed during witness interviews

t_{si} = time elapsed during initial subject interview

t_{fsi} = time elapsed during follow-on subject interview

t_b = time elapsed during legal and/or command briefings

t_t = time elapsed during trial

t_a = time elapsed during administrative duties

ISA = investigative service agent

v = alleged victim of sexual assault

w = witness

s = subject

SJA = staff judge advocate (or representative)

CS = command staff representative

d. Legal Costs

An interview was conducted with a member of an Army staff judge advocates office to better understand the role of military legal services in sexual assault cases (R. Pruitt, personal communication, August 13, 2013). During this interview, Captain Pruitt discussed how Army JAG handles sexual-assault cases from beginning to end. In addition, several members of the Coast Guard legal community provided opinions through personal communications on the duration of events in legal and administrative

processes, and who is involved in these events. Similar to the task of generalizing investigative procedures to capture all cases, it was also challenging to attempt to simplify the legal data to fit all cases.

(1) Assumptions . The members of the legal offices that the researcher spoke with did not track the number of hours spent on various phases of cases. Therefore, estimates of the duration of the phases of legal and administrative events were based on information gained from personal communications with experts. Assumptions regarding various phases of courts-martial proceedings, administrative proceedings, administrative separation board proceedings, and non-judicial punishment proceedings are presented in tables 25, 26, 27, and 28, respectively. Some of the offices were able to provide information regarding funds expended on past cases, which was used to develop estimations on direct-cost expenditures associated with courts-martial.

The researcher made the additional assumptions regarding the legal, administrative, and non-judicial punishment accountability process of sexual assault cases in the military:

- Witness ranks mirrored the makeup of the FY 2012 victim and subject populations.
- Temporary duty (TDY) per diem rates average \$225 per day.
- Expert consultants and expert witnesses per case range from \$0, where no expert was used, to \$50,000 per case where an expert was hired. The typical or average value for experts in preparation for or at trial was assumed to be \$10,000.

Table 25. Summary of Assumptions Used for Courts-Martial Process of Sexual Assault Cases in the U.S. Military Services

Court-Martial Indirect Legal Costs	Who is involved in the Legal Process?					Minimum Time Spent on Work Item		Typical Time Spent on Work Item		Maximum Time Spent on Work Item	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Initial Case Review	Attorney (Prosecutor)	Military	O-3	O-3	O-5	1	4	2	4	2	6
	Staff Judge Advocate	Military	O-4	O-5	O-6	1	1	1	1	1	2
	Victim	Case Dependent	Use Victim Distribution			1	2	1	2	1	3
	Victim Advocate	Military	E-4	GS-9	E-7	1	2	1	2	1	3
Involvement with Investigation and Case Work prior to Probable Cause Determination	Attorney (Prosecutor)	Military	O-3	O-3	O-5	4	6	5	6	15	8
	Staff Judge Advocate	Military	O-4	O-5	O-6	0	0	0	0	0	0
	Convening Authority	Military	O-6	O-6	O-8	1	2	1	2	1	6
	Attorney (Prosecutor)	Military	O-3	O-3	O-5	5	4	10	6	20	6
Preparation for Article 32 Hearing	Special Victim Prosecutor*	Military	O-3	O-4	O-5	4	2	6	3	10	4
	Staff Judge Advocate	Military	O-4	O-5	O-6	0	0	0	0	0	0
	Victim	Case Dependent	Use Victim Distribution			1	2	1	4	2	4
	Victim Advocate	Military	E-4	GS-9	E-7	1	2	1	4	2	4
	Attorney (Defense)	Military	O-3	O-3	O-6	5	4	10	6	20	6
	Subject	Military	Use Subject Distribution			1	4	2	4	3	4
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			1	1	1	2	2	3
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			1	1	1	2	2	3
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			1	1	1	2	2	3
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			1	1	1	2	2	3
	Paralegal (for Prosecution)	Military (or Civilian)	E-4	E-6	E-7	5	4	7	3	10	4
	Paralegal (for Defense)	Military (or Civilian)	E-4	E-6	E-7	5	4	7	3	10	4
Article 32 Hearing (and Preparation of Report for Convening Officer)	Article 32 Officer	Military	O-4	O-4	O-5	5	6	5	6	8	6
	Attorney (Prosecutor)	Military	O-3	O-3	O-5	1	4	1	8	2	8
	Special Victim Prosecutor*	Military	O-3	O-4	O-5	3	8	3	8	4	8
	Victim	Case Dependent	Use Victim Distribution			1	4	1	8	2	8
	Victim Advocate	Military	E-4	GS-9	E-7	1	4	1	8	2	8
	Attorney (Defense)	Military	O-3	O-3	O-6	1	4	1	8	2	8
	Subject	Military	Use Subject Distribution			1	4	1	8	2	8
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			1	8	3	8	4	8
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	3	8	4	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			1	8	3	8	4	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	3	8	4	8
	Paralegal (for Prosecution)	Military (or Civilian)	E-4	E-6	E-7	1	4	1	8	2	8
	Paralegal (for Defense)	Military (or Civilian)	E-4	E-6	E-7	1	4	1	8	2	8
	Convening Authority	Military	O-6	O-6	O-8	1	4	1	4	2	6

Court-Martial Indirect Legal Costs	Who is involved in the Legal Process?					Minimum Time Spent on		Typical Time Spent on Work		Maximum Time Spent on	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Case Preparation for Trial	Attorney (Prosecutor)	Military	O-3	O-3	O-5	15	6	20	6	30	8
	Special Victim Prosecutor*	Military	O-3	O-4	O-5	10	2	15	2	25	3
	Staff Judge Advocate	Military	O-4	O-5	O-6	0	0	0	0	0	10
	Victim	Case Dependent	Use Victim Distribution			2	4	2	4	4	4
	Victim Advocate	Military	E-4	GS-9	E-7	2	4	2	4	4	4
	Attorney (Defense)	Military	O-3	O-3	O-6	15	6	20	6	30	8
	Subject	Military	Use Subject Distribution			2	4	2	4	4	4
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			1	1	1	2	2	3
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	1	2	2	3
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	1	2	2	3
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	1	2	2	3
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			1	1	1	2	2	3
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	1	2	2	3
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	1	2	2	3
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	1	2	2	3
	Paralegal (for Prosecution)	Military (or Civilian)	E-4	E-6	E-7	10	2	15	3	25	4
	Paralegal (for Defense)	Military (or Civilian)	E-4	E-6	E-7	10	2	15	3	25	4
Court-Martial Findings Phase (including arraignment & motions hearing)	Judge	Military	O-4	O-5	O-6	1	8	4	8	7	8
	Attorney (Prosecutor)	Military	O-3	O-3	O-5	1	8	2	8	5	8
	Special Victim Prosecutor*	Military	O-3	O-4	O-5	1	8	4	8	7	8
	Victim	Case Dependent	Use Victim Distribution			1	8	2	8	5	8
	Victim Advocate	Military	E-4	GS-9	E-7	1	8	2	8	5	8
	Attorney (Defense)	Military	O-3	O-3	O-6	1	8	4	8	7	8
	Subject	Military	Use Subject Distribution			1	8	2	8	5	8
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			1	8	2	8	7	8
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	2	8	7	8
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	2	8	7	8
	Witnesses (for Prosecution)*	Case Dependent	Use Victim Distribution			0	0	2	8	7	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			1	8	2	8	7	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	2	8	7	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	2	8	7	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	0	2	8	7	8
	Panel Member (Lead)	Military	O-5	O-5	O-6	0	0	2	8	5	8
	Panel Member	Military	E-3	E-5	O-6	0	0	2	8	5	8
	Panel Member	Military	E-3	E-5	O-6	0	0	2	8	5	8
	Panel Member	Military	E-3	E-5	O-6	0	0	2	8	5	8
	Panel Member	Military	O-2	O-3	O-6	0	0	2	8	5	8
	Panel Member	Military	O-2	O-3	O-6	0	0	2	8	5	8
	Panel Member	Military	O-2	O-3	O-6	0	0	2	8	5	8
	Panel Member	Military	O-2	O-3	O-6	0	0	2	8	5	8
	Paralegal (for Prosecution)	Military (or Civilian)	E-4	E-6	E-7	1	8	2	8	5	8
	Paralegal (for Defense)	Military (or Civilian)	E-4	E-6	E-7	1	8	2	8	5	8
	Court Reporter	Military (or Civilian)	GS-8	E-5	E-6	1	8	2	8	5	8

Court-Martial Indirect Legal Costs	Who is involved in the Legal Process?					Minimum Time Spent on		Typical Time Spent on Work		Maximum Time Spent on	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Court Martial Sentencing Phase	Judge	Military	O-4	O-5	O-6	0.5	8	1	8	2	8
	Attorney (Prosecutor)	Military	O-3	O-3	O-5	0.5	8	1	8	2	8
	Special Victim Prosecutor*	Military	O-3	O-4	O-5	0.5	8	1	8	2	8
	Victim	Case Dependent	Use Victim Distribution			0.5	8	1	8	2	8
	Victim Advocate	Military	E-4	GS-9	E-7	0.5	8	1	8	2	8
	Attorney (Defense)	Military	O-3	O-3	O-6	0.5	8	1	8	2	8
	Subject	Military	Use Subject Distribution			0.5	8	1	8	2	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	8	1	8	2	8
	Witnesses (for Defense)*	Case Dependent	Use Subject Distribution			0	8	1	8	2	8
	Paralegal (for Prosecution)	Military (or Civilian)	E-4	E-6	E-7	0.5	8	1	8	2	8
	Paralegal (for Defense)	Military (or Civilian)	E-4	E-6	E-7	0.5	8	1	8	2	8
	Court Reporter	Military (or Civilian)	GS-8	E-5	E-6	0.5	8	1	8	2	8
Post Trial	Paralegal	Military (or Civilian)	E-4	E-6	E-7	1	1	3	2	3	4
	Court Reporter	Military (or Civilian)	GS-8	E-5	E-6	2	8	4	8	7	8
	Judge	Military	O-4	O-5	O-6	0.25	8	0.5	8	4	8
	Attorney (Prosecutor)	Military	O-3	O-3	O-5	0.25	8	0.5	8	4	8
	Special Victim Prosecutor*	Military	O-3	O-4	O-5	0.25	8	0.5	8	4	8
	Attorney (Defense)	Military	O-3	O-3	O-6	0.25	8	0.5	8	4	8
	Staff Judge Advocate	Military	O-4	O-5	O-6	3	2	4	3	5	4
	Convening Authority	Military	O-6	O-6	O-8	2	4	3	3	4	8

Table 26. Summary of Assumptions Used for Administrative Action Process of Sexual Assault Cases in the U.S. Military Services

Administrative Action Indirect Costs	Who is involved in the Legal Process?					Minimum Time Spent on Work Item		Typical Time Spent on Work Item		Maximum Time Spent on Work	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Initial Case Review	Attorney	Military	O-2	O-3	O-6	1	3	2	3	2	3
Command Investigation	Investigating Officer	Military	O-1	O-3	O-5	3	3	4	4	7	5
	Victim	Case Dependent	Use FY12 Victim Distribution			1	0.5	1	1	1	3
	Subject	Military	Use NJP Subject Distribution			1	0.5	1	1	1	3
	Witness	Case Dependent	Use NJP Subject Distribution			0	0	1	0.25	1	2
	Witness	Case Dependent	Use NJP Subject Distribution			0	0	2	0.25	1	2
Review of Investigation and Findings	Commanding Officer	Military	O-5	O-6	O-6	1	3	1	5	2	3.5
Administrative or Paralegal Work	Yeoman	Military	E-4	E-5	E-6	1	1	1	1	1	2

Table 27. Summary of Assumptions Used for Administrative Separation Board Processes of Sexual-Assault Cases in the U.S. Military Services

Administrative Separation Indirect Legal Costs	Who is involved in the Legal Process?					Minimum Time Spent on Work Item		Typical Time Spent on Work Item		Maximum Time Spent on Work	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Initial Case Review	Attorney	Military	O-2	O-3	O-6	1	3	2	3	3	6
Command Investigation	Admin Sep Board Recorder*	Military	O-1	O-2	O-4	0	0	9	3	15	3
	Junior Board Member*	Military	O-1	O-2	O-4	6	4	0	0	0	0
	Victim	Case Dependent	Use FY12 Victim Distribution			1	0.5	1	1	1	3
	Subject	Military	Use Admin. Sep. Subject Distribution			1	0.5	1	1	1	3
	Witness	Case Dependent	Use Admin. Sep. Subject Distribution			0	0	1	0.25	1	2
	Witness	Case Dependent	Use Admin. Sep. Subject Distribution			0	0	2	0.25	1	2
Preparation for Board	Attorney	Military	O-3	O-3	O-5	5	4	9	4	15	3
	Subject	Military	Use Admin. Sep. Subject Distribution			2	4	3	4	10	3
Administrative Separation Board	Senior Board Member	Military	O-4	O-4	O-6	1	8	1	8	2	8
	Board Member	Military	O-1	O-2	O-4	1	8	1	8	2	8
	Junior Board Member*	Military	O-1	O-2	O-4	1	8	1	8	2	8
	Admin Sep Board Recorder*	Military	O-1	O-2	O-4	0	0	1	8	2	8
	Attorney	Military	O-3	O-3	O-5	5	4	9	4	15	3
	Victim	Case Dependent	Use FY12 Victim Distribution			0	0	1	2	1	8
	Subject	Military	Use Admin. Sep. Subject Distribution			1	8	1	8	2	8
	Witness	Case Dependent	Use Admin. Sep. Subject Distribution			0	0	1	2	1	8
	Witness	Case Dependent	Use Admin. Sep. Subject Distribution			0	0	1	2	1	8
Administrative or Paralegal Work	Yeoman	Military	E-4	E-5	E-6	1	8	3	8	5	8
Review of Investigation and Findings	Convening Authority	Military	O-5	O-6	O-6	1	3	1	5	2	3.5

*A junior board member may act as board recorder if there is not a non-voting member of the board assigned; therefore, for the minimum cost case, the recorder has 0 time spent as the minimum value.

Table 28. Summary of Assumptions Used for Non-Judicial Punishment Processes of Sexual-Assault Cases in the U.S. Military Services

Administrative Action Indirect Costs	Who is involved in the Legal Process?					Minimum Time Spent on Work Item		Typical Time Spent on Work Item		Maximum Time Spent on Work	
	Position	Military/Civilian	Lowest Paygrade	Typical Paygrade	Highest Paygrade	Days	Hours/Day	Days	Hours/Day	Days	Hours/Day
Initial Case Review	Attorney	Military	O-2	O-3	O-6	1	3	2	3	2	3
Command Investigation	Investigating Officer	Military	O-1	O-3	O-5	3	3	4	4	7	5
	Victim	Case Dependent	Use FY12 Victim Distribution			1	0.5	1	1	1	3
	Subject	Military	Use NJP Subject Distribution			1	0.5	1	1	1	3
	Witness	Case Dependent	Use NJP Subject Distribution			0	0	1	0.25	1	2
	Witness	Case Dependent	Use NJP Subject Distribution			0	0	2	0.25	1	2
Review of Investigation and Findings	Commanding Officer	Military	O-5	O-6	O-6	1	3	1	5	2	3.5
Administrative or Paralegal Work	Yeoman	Military	E-4	E-5	E-6	1	1	1	1	1	2

Table 29. Summary of Assumed Days of Travel Required for Members Involved in Courts-Martial Proceedings

Traveler	Minimum # Days	Typical # of Days	Maximum # of Days
Special Victim Prosecutor	0	3	13
Victim	0	3	13
Subject	0	3	13
Witness	0	3	11
Witness	0	3	11
Witness	0	3	11
Witness	0	3	11
Witness	0	0	11
Witness	0	0	11
Witness	0	0	11
Witness	0	0	11
Attorney (Defense)	0	3	13
Judge	0	3	13

(2) Calculations. The following formula was used to estimate legal, administrative, and non-judicial punishment costs related to sexual assaults in which an investigation resulted in some type of action against the subject of the investigation.

$$L = CM_{id} + CM_d + AA + ASB + NJP \quad (2)$$

where L = estimated total case prosecution related costs

CM_{id} = estimated total indirect courts-martial related costs

CM_d = estimated total direct courts-martial related costs

AA = estimated total administrative action related costs (not including administrative separation board costs)

ASB = estimated total administrative board related costs

NJP = estimated total non-judicial proceedings related costs

$$\begin{aligned}
CM = \sum_{i=1}^n & \left[tucr_{p1_i}(CompositePay_{p1}) + tucr_{p2_i}(CompositePay_{p2}) \right. \\
& + tucr_{p3_i}(CompositePay_{p3}) + tucr_{p4_i}(CompositePay_{p4}) \\
& + \left[tpcd_{p1_i}(CompositePay_{p1}) + tpcd_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + tpcd_{p5_i}(CompositePay_{p5}) \right] \\
& + \left[tpa32_{p1_i}(CompositePay_{p1}) + tpa32_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + \dots tpa32_{p13_i}(CompositePay_{p13}) \right] \\
& + \left[ta32_{p1_i}(CompositePay_{p1}) + ta32_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + \dots ta32_{p14_i}(CompositePay_{p14}) \right] \\
& + \left[tcp_{p1_i}(CompositePay_{p1}) + tcp_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + \dots tcp_{p18_i}(CompositePay_{p18}) \right] \\
& + \left[tcmf_{p1_i}(CompositePay_{p1}) + tcmf_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + \dots tcmf_{p28_i}(CompositePay_{p28}) \right] \\
& + \left[tcms_{p1_i}(CompositePay_{p1}) + tcms_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + \dots tcms_{p28_i}(CompositePay_{p28}) \right] \\
& + \left[tpt_{p1_i}(CompositePay_{p1}) + tpt_{p2_i}(CompositePay_{p2}) \right. \\
& \quad \left. + \dots tpt_{p28_i}(CompositePay_{p28}) \right]
\end{aligned} \tag{2}$$

where CM_{id} = estimated total indirect courts-martial related costs
i = service member who had a sexual assault case brought to court-martial
tucr = time elapsed during initial case review
tpcd = time elapsed during initial victim interview
tpa32 = time elapsed during follow-on victim interview
ta32 = time elapsed during crime scene analysis and reporting
tcp = time elapsed during witness interviews
tcmf = time elapsed during initial subject interview
tcms = time elapsed during follow-on subject interview
tpt = time elapsed during legal and/or command briefings
P1 = attorney (prosecutor)
P2 = staff judge advocate
P3 = victim
P4 = victim advocate
P5 = convening authority
P6 = special victim prosecutor
P7 = attorney (defense)
P8 = subject
P9 = witnesses (for prosecution)
P10 = witnesses (for prosecution)

P11 = witnesses (for defense)
P12 = witnesses (for defense)
P13 = paralegal (for prosecution)
P14 = paralegal (for defense)
P15 = Article 32 officer
P16 = witnesses (for prosecution)
P17 = witnesses (for defense)
P18 = witnesses (for defense)
P19 = judge
P20 = panel member (lead)
P21 = panel member
P22 = panel member
P23 = panel member
P24 = panel member
P25 = panel member
P26 = panel member
P27 = panel member
P28 = court reporter
ISA = investigative service agent
v = alleged victim of sexual assault
w = witness
s = subject
SJA = staff judge advocate (or representative)
CS = command staff representative

$$CM_d = \sum_{i=1}^n TravelCosts_i + ExpertCosts_i \quad (2)$$

where CM_d = estimated total direct courts-martial related costs
i = service member who had a sexual-assault case brought to court-martial

$$\begin{aligned}
 AA = \sum_{i=1}^n & tic_i(CompositePay_{JAG}) \\
 & + \left[\begin{aligned} & tciio_i(CompositePay_{io}) + tciv_i(CompositePay_v) \\ & + tcis_i(CompositePay_s) + tciw1_i(CompositePay_{w1}) \\ & + tciw2_i(CompositePay_{w2}) \end{aligned} \right] \\
 & + tr_i(CompositePay_{CO}) + ta_i(CompositePay_y)
 \end{aligned} \quad (2)$$

where AA = estimated total Administrative Action-related costs (not including administrative separation board costs)
i = service member who had a sexual assault case disposed of with administrative action
tic = time elapsed during initial case review

tci = time elapsed during command investigation
tr = time elapsed during review of investigation and findings
ta = time elapsed during administrative or paralegal work
JAG = judge advocate generals representative
io = investigating officer
v = victim
s = subject
w = witness
co = commanding officer
y = yeoman

$$\begin{aligned}
 ASB = & \sum_{i=1}^n tic_i(CompositePay_{JAG}) \\
 & + \left[tcip2_i(CompositePay_{p2}) + tcip3_i(CompositePay_{p3}) \right. \\
 & \quad \left. + \dots + tcip7_i(CompositePay_{p7}) \right] \\
 & + \left[tpJAG_i(CompositePay_{JAG}) + tps_i(CompositePay_s) \right] \\
 & + \left[tbp1_i(CompositePay_{p1}) + tbp2_i(CompositePay_{p2}) \right. \\
 & \quad \left. + \dots + tbp11_i(CompositePay_{p11}) \right] \\
 & + ta_i(CompositePay_y) + tr_i(CompositePay_{co})
 \end{aligned} \tag{2}$$

where *ASB* = estimated total Administrative Separation Board-related costs
i = service member who had a sexual assault case disposed of with administrative separation board action
tic = time elapsed during initial case review
tci = time elapsed during command investigation
tp = time elapsed during preparation for board
tb = time elapsed during administrative separation board
ta = time elapsed during administrative or paralegal work
tr = time elapsed during review of investigation and findings
P1 = *JAG* = judge advocate generals representative
P2 = administrative separation board recorder
P3 = junior board member
P4 = victim
P5 = subject
P6 = witness
P7 = witness
P8 = senior board member
P9 = board member
P10 = *y* = yeoman
P11 = *CO* = commanding officer

$$\begin{aligned}
NJP = & \sum_{i=1}^n tio_i(CompositePay_{JAG}) \\
& + \left[tciio_i(CompositePay_{io}) + tciv_i(CompositePay_v) + \right. \\
& + tcis_i(CompositePay_s) + tciw1_i(CompositePay_{w1}) + \\
& \left. tciw2_i(CompositePay_{w2}) \right] \\
& + tr_i(CompositePay_{co}) + tp_i(CompositePay_{co}) \\
& + ta_i(CompositePay_y)
\end{aligned} \tag{2}$$

where NJP = estimated total Non-Judicial Proceedings-related costs
 i = service member who had a sexual assault case disposed of with NJP
 tio = time elapsed during initial case review
 tci = time elapsed during command investigation
 tr = time elapsed during review of investigation and findings
 tp = time elapsed during NJP proceedings
 ta = time elapsed during administrative or paralegal work
 JAG = judge advocate generals representative
 io = investigating officer
 v = victim
 s = subject
 w = witness
 co = commanding officer
 y = yeoman

6. Total DoD Costs

The estimated total organizational costs of sexual assault in the U.S. military are calculated using the following equation:

$$Total\ Cost = I + A + PD + SR + ET + M + VS + INV + L \tag{2}$$

where Total DoD Costs = total organizational costs of sexual assault in the U.S. Navy, U.S. Army, U.S. Air Force, and U.S. Marine Corps
 I = estimated total incident related costs
 A = estimated total absenteeism related costs
 PD = estimated total productivity reduction related costs
 SR = estimated total separation and replacement related costs
 ET = estimated total emergency transfer related costs
 M = estimated total medical and mental health related costs
 VS = estimated total victim services related costs
 INV = estimated total case investigation related costs
 L = estimated total case prosecution related costs

7. U.S. Coast Guard Costs

a. Assumptions

Because Coast Guard sexual-assault statistics data used in this research was not as complete as the DoD sexual-assault statistics data, I applied cost per incident information calculated for the DoD services and the DoD average cost to Coast Guard sexual-assault data to determine organizational costs.

The Coast Guard did not participate in the FY 2012 WGRA. However, they did participate in the FY 2010 WGRA. Findings from the FY 2010 WGRA survey reported 1.1% of the Coast Guard active-duty population experienced unwanted sexual contact with the previous 12 months (Defense Manpower Data Center, 2011). For this research, it was assumed 1.1% of the Coast Guard active duty population in FY 2012 also experienced unwanted sexual contact in the past year. The estimated active duty Coast Guard population at the end of FY 2012 was 42,190 (United States Coast Guard, 2012a). Therefore, the estimated number of victims of sexual assault in the Coast Guard in FY 2012 is 464.

b. Calculations

The Coast Guard reported that there were 141 victims in 95 unrestricted reports of sexual assault and 15 restricted reports of sexual assault in FY 2012 (2013).

The estimated total organizational costs of sexual assault in the Coast Guard are calculated using the following equation:

$$\text{Total Costs}_{CG} = UI_{CG} * UICosts_{ave} + RI_{CG} * RICosts_{ave} + URI_{CG} * URICosts \quad (2)$$

where Total Costs_{CG} = total organizational costs of sexual assault in the Coast Guard

UI_{CG} = number of victims of unrestricted reports of sexual assault in the Coast Guard

RI_{CG} = number of victims of restricted reports of sexual assault in the Coast Guard

URI_{CG} = estimated number of victims of unreported sexual assaults in the Coast Guard

$UICosts_{ave}$ = average cost per victim of unrestricted reports of sexual assault in DoD service

$RICosts_{ave}$ = average cost per victim of restricted reports of sexual assault in DoD service

$URICosts_{ave}$ = average cost per victim of unreported incidents of sexual assault in DoD service

8. Results

Estimated organizational costs of sexual assault in the U.S. military are presented by reporting category: unrestricted reports of sexual assault, restricted reports of sexual assault, and unreported sexual assaults. Cost elements have a minimum estimate, a typical or average estimate, and a maximum estimate for each service. Additionally, the costs have been aggregated to provide cost estimates for all incidents of sexual assault that occurred in the DoD in FY 2012. As explained previously in this chapter, the average costs for each reporting category were used to calculate the estimated organizational costs experienced by the Coast Guard due to sexual assaults in FY 2012.

a. Costs Related to Unrestricted Reports of Sexual-Assault Incidents

Organizational costs from unrestricted reports of sexual assaults occurring in FY 2012 in the U.S. military are presented in Table 30.

Table 30. Organization Costs Related to Unrestricted Reports of Sexual Assault in FY 2012 in the U.S. Military

Estimated Cost Range	Navy			Army			Air Force			Marine Corps		
	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum
Incident Costs	\$ 2,521	\$ 3,134	\$ 4,430	\$ 4,536	\$ 5,549	\$ 7,238	\$ 866	\$ 1,047	\$ 1,343	\$ 1,637	\$ 1,957	\$ 2,605
Initial Report Cost	\$ 25,072	\$ 85,387	\$ 189,623	\$ 60,796	\$ 207,961	\$ 460,794	\$ 19,187	\$ 67,643	\$ 152,306	\$ 14,755	\$ 49,924	\$ 108,963
Command & Support Team Meetings	\$ -	\$ 722,400	\$ 722,400	\$ -	\$ 1,786,267	\$ 1,786,267	\$ -	\$ 610,990	\$ 610,990	\$ -	\$ 444,030	\$ 444,030
Medical Indirect Costs	\$ 416	\$ 23,057	\$ 45,697	\$ 6,949	\$ 74,624	\$ 142,298	\$ 2,799	\$ 33,610	\$ 64,422	\$ 3,538	\$ 45,556	\$ 87,574
Mental Health Indirect Costs	\$ -	\$ 80,509	\$ 161,017	\$ -	\$ 69,766	\$ 139,532	\$ -	\$ 76,124	\$ 152,248	\$ -	\$ 77,446	\$ 154,891
Medical Direct Costs	\$ 8,830	\$ 408,685	\$ 808,540	\$ 148,344	\$ 680,325	\$ 1,212,306	\$ 67,991	\$ 312,540	\$ 557,089	\$ 74,172	\$ 509,956	\$ 945,740
Mental Health Direct Costs	\$ -	\$ 240,746	\$ 481,491	\$ -	\$ 210,849	\$ 421,698	\$ -	\$ 234,452	\$ 468,903	\$ -	\$ 230,780	\$ 461,560
Indirect Investigative Service Costs	\$ 271,928	\$ 1,095,982	\$ 3,845,681	\$ 659,172	\$ 2,739,119	\$ 9,406,535	\$ 199,468	\$ 807,946	\$ 2,498,993	\$ 126,845	\$ 534,811	\$ 1,874,775
Investigative Service Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Legal Court Martial Related Indirect Costs	\$ 4,443,892	\$ 9,551,541	\$ 28,316,888	\$ 17,165,240	\$ 37,653,376	\$ 120,724,494	\$ 1,813,764	\$ 3,916,646	\$ 11,933,296	\$ 1,218,416	\$ 2,803,832	\$ 8,221,251
Legal Court Martial Related Direct Costs	\$ -	\$ 1,575,350	\$ 8,273,650	\$ -	\$ 6,751,500	\$ 35,458,500	\$ -	\$ 691,225	\$ 3,630,275	\$ -	\$ 466,175	\$ 2,448,325
Administrative Action Costs	\$ 12,634	\$ 31,232	\$ 70,619	\$ 74,925	\$ 181,170	\$ 445,959	\$ 26,583	\$ 63,713	\$ 148,774	\$ 10,764	\$ 26,700	\$ 62,672
Administrative Separation Board Costs	\$ 68,294	\$ 119,852	\$ 257,694	\$ 1,248,818	\$ 2,177,234	\$ 5,068,255	\$ 51,487	\$ 89,691	\$ 197,230	\$ 163,792	\$ 290,107	\$ 649,007
NonJudicial Punishment Costs	\$ 55,710	\$ 130,949	\$ 294,518	\$ 184,635	\$ 424,434	\$ 1,034,812	\$ 42,815	\$ 97,761	\$ 226,724	\$ 27,098	\$ 63,763	\$ 148,546
Expedited Victim Transfer Costs	\$ 205,327	\$ 207,825	\$ 215,019	\$ 315,152	\$ 318,987	\$ 330,029	\$ 205,327	\$ 207,825	\$ 215,019	\$ 57,300	\$ 57,998	\$ 60,005
Subject Discharge Costs (Administrative)	\$ 118,294	\$ 169,852	\$ 307,694	\$ 1,415,068	\$ 2,343,484	\$ 5,234,505	\$ 72,737	\$ 110,941	\$ 218,480	\$ 192,542	\$ 318,857	\$ 677,757
Subject Discharge Costs (Move/Travel)	\$ 205,800	\$ 205,800	\$ 205,800	\$ 1,310,400	\$ 1,310,400	\$ 1,310,400	\$ 100,800	\$ 100,800	\$ 100,800	\$ 193,200	\$ 193,200	\$ 193,200
Subject Discharge Costs (Replacement Recruiting)	\$ 168,933	\$ 288,917	\$ 408,901	\$ 1,075,655	\$ 1,839,634	\$ 2,603,613	\$ 82,743	\$ 141,510	\$ 200,278	\$ 158,590	\$ 271,228	\$ 383,866
Subject Discharge Costs (Replacement Training)	\$ 2,102,100	\$ 2,102,100	\$ 2,102,100	\$ 11,082,200	\$ 12,010,100	\$ 38,439,800	\$ 1,118,400	\$ 1,118,400	\$ 1,118,400	\$ 2,103,200	\$ 2,180,900	\$ 2,742,900
*Victim Resignation Cost (Administrative)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Move/Travel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Replacement Recruiting)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Replacement Training)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Lowered Productivity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Absenteeism	\$ 31,241	\$ 36,197	\$ 48,025	\$ 38,103	\$ 44,670	\$ 57,464	\$ 16,827	\$ 19,939	\$ 26,723	\$ 17,541	\$ 20,169	\$ 26,126
Totals	\$ 7,720,991	\$ 17,079,513	\$ 46,759,788	\$ 34,789,993	\$ 70,829,449	\$ 224,284,500	\$ 3,821,793	\$ 8,702,802	\$ 22,522,292	\$ 4,363,390	\$ 8,587,389	\$ 19,693,794

Note: *All costs related to these categories are calculated for the entire population using 2012 WGRA Survey Data and are reported under unreported incident costs.

b. Costs Related to Restricted Reports of Sexual-Assault Incidents

Organizational costs from restricted reports of sexual assaults occurring in FY 2012 in the U.S. military are presented in Table 31.

Table 31. Organization Costs Related to Restricted Reports of Sexual Assault in FY 2012 in the U.S. Military

Estimated Cost Range	Navy			Army			Air Force			Marine Corps		
	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum
Incident Costs	\$ 747	\$ 928	\$ 1,312	\$ 484	\$ 592	\$ 772	\$ 639	\$ 773	\$ 991	\$ 180	\$ 215	\$ 287
Initial Report Cost	\$ 10,899	\$ 36,567	\$ 82,804	\$ 9,806	\$ 32,622	\$ 74,454	\$ 16,581	\$ 56,006	\$ 130,388	\$ 5,167	\$ 16,599	\$ 37,098
Command & Support Team Meetings	\$ -	\$ 163,845	\$ 163,845	\$ -	\$ 150,477	\$ 150,477	\$ -	\$ 262,318	\$ 262,318	\$ -	\$ 71,393	\$ 71,393
Medical Indirect Costs	\$ 598	\$ 10,358	\$ 20,119	\$ 1,225	\$ 7,644	\$ 14,063	\$ 10,817	\$ 30,728	\$ 50,638	\$ 467	\$ 6,101	\$ 11,736
Mental Health Indirect Costs	\$ -	\$ 27,301	\$ 54,602	\$ -	\$ -	\$ -	\$ -	\$ 53,984	\$ 107,969	\$ -	\$ 14,899	\$ 29,798
Medical Direct Costs	\$ 15,011	\$ 149,455	\$ 283,899	\$ 33,554	\$ 214,358	\$ 395,162	\$ 47,682	\$ 339,750	\$ 631,818	\$ 9,713	\$ 68,822	\$ 127,931
Mental Health Direct Costs	\$ -	\$ 96,508	\$ 193,016	\$ -	\$ 68,185	\$ 136,370	\$ -	\$ 199,835	\$ 399,669	\$ -	\$ 44,058	\$ 88,116
Indirect Investigative Service Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Investigative Service Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Legal Court Martial Related Indirect Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Legal Court Martial Related Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative Action Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative Separation Board Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NonJudicial Punishment Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expedited Victim Transfer Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Administrative)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Move/Travel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Replacement Recruiting)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Replacement Training)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Administrative)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Move/Travel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Replacement Recruiting)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Replacement Training)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Lowered Productivity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Absenteeism	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals	\$ 27,254	\$ 484,962	\$ 799,597	\$ 45,068	\$ 473,877	\$ 771,297	\$ 75,719	\$ 943,394	\$ 1,583,791	\$ 15,527	\$ 222,087	\$ 366,358

Note: *All costs related to these categories are calculated for the entire population using 2012 WGRA Survey Data and are reported under Unreported Incident Costs.

c. Costs Related to Unreported Sexual-Assault Incidents

Organizational costs from unreported sexual assaults occurring in FY 2012 in the U.S. military are presented in Table 32.

Table 32. Organization Costs Related to Unreported Sexual Assaults in FY 2012 in the U.S. Military

Estimated Cost Range	Navy			Army			Air Force			Marine Corps		
	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum
Incident Costs	\$ -	\$ 28,836	\$ 125,142	\$ 1,535	\$ 52,767	\$ 178,763	\$ 2,142	\$ 9,036	\$ 11,758	\$ 284	\$ 31,995	\$ 96,902
Initial Report Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Command & Support Team Meetings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Medical Indirect Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mental Health Indirect Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Medical Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mental Health Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Indirect Investigative Service Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Investigative Service Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Legal Court Martial Related Indirect Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Legal Court Martial Related Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative Action Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative Separation Board Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NonJudicial Punishment Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expedited Victim Transfer Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Administrative)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Move/Travel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Replacement Recruiting)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subject Discharge Costs (Replacement Training)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
*Victim Resignation Cost (Administrative)	\$ 135,055	\$ 464,530	\$ 937,289	\$ 294,285	\$ 768,730	\$ 1,399,468	\$ 29,121	\$ 242,930	\$ 644,395	\$ 103,041	\$ 243,419	\$ 496,029
*Victim Resignation Cost (Move/Travel)	\$ 504,241	\$ 1,734,368	\$ 3,499,461	\$ 1,098,744	\$ 2,870,129	\$ 5,225,055	\$ 108,728	\$ 907,002	\$ 2,405,914	\$ 384,713	\$ 908,830	\$ 1,851,974
*Victim Resignation Cost (Replacement Recruiting)	\$ 467,358	\$ 2,641,954	\$ 7,417,936	\$ 1,018,375	\$ 4,372,054	\$ 11,075,741	\$ 100,775	\$ 1,381,632	\$ 5,099,903	\$ 356,572	\$ 1,384,416	\$ 3,925,696
*Victim Resignation Cost (Replacement Training)	\$ 5,823,572	\$ 20,030,516	\$ 40,415,893	\$ 10,853,242	\$ 28,350,749	\$ 51,612,396	\$ 1,286,003	\$ 10,727,777	\$ 28,456,489	\$ 4,550,275	\$ 11,542,166	\$ 43,946,751
*Lowered Productivity	\$ 638,097	\$ 20,422,341	\$ 117,255,051	\$ 1,349,343	\$ 32,032,415	\$ 167,833,618	\$ 41,957	\$ 7,071,790	\$ 54,330,652	\$ 526,025	\$ 13,286,341	\$ 99,765,070
Absenteeism	\$ 1,742,141	\$ 5,065,468	\$ 11,115,334	\$ 2,209,267	\$ 6,502,680	\$ 14,032,772	\$ 325,780	\$ 782,031	\$ 812,605	\$ 1,091,369	\$ 3,585,443	\$ 9,437,864
Totals	\$ 9,310,465	\$ 50,388,012	\$ 180,766,107	\$ 16,824,791	\$ 74,949,524	\$ 251,357,813	\$ 1,894,506	\$ 21,122,198	\$ 91,761,716	\$ 7,012,278	\$ 30,982,609	\$ 159,520,286

Note: *All costs related to these categories are calculated for the entire population using 2012 WGRA Survey Data and are reported under unreported incident costs.

d. Costs Related to All Reporting Categories of Sexual-Assault Incidents

Organizational costs from all sexual assaults occurring in FY 2012 in the U.S. military are presented in Table 33.

Table 33. Organization Costs Related to All Sexual Assaults in FY 2012 in the U.S. Military

Estimated Cost Range	Navy			Army			Air Force			Marine Corps		
	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum	Minimum	Typical / Average	Maximum
Incident Costs	\$ 3,268	\$ 32,898	\$ 130,884	\$ 6,555	\$ 58,908	\$ 186,773	\$ 3,646	\$ 10,856	\$ 14,091	\$ 2,101	\$ 34,168	\$ 99,793
Initial Report Cost	\$ 35,971	\$ 121,953	\$ 272,427	\$ 70,602	\$ 240,583	\$ 535,248	\$ 35,768	\$ 123,649	\$ 282,693	\$ 19,922	\$ 66,523	\$ 146,061
Command & Support Team Meetings	\$ -	\$ 886,245	\$ 886,245	\$ -	\$ 1,936,744	\$ 1,936,744	\$ -	\$ 873,309	\$ 873,309	\$ -	\$ 515,423	\$ 515,423
Medical Indirect Costs	\$ 1,013	\$ 33,415	\$ 65,817	\$ 8,173	\$ 82,267	\$ 156,361	\$ 13,616	\$ 64,338	\$ 115,060	\$ 4,005	\$ 51,658	\$ 99,310
Mental Health Indirect Costs	\$ -	\$ 107,809	\$ 215,619	\$ -	\$ 69,766	\$ 139,532	\$ -	\$ 130,108	\$ 260,217	\$ -	\$ 92,344	\$ 184,689
Medical Direct Costs	\$ 23,841	\$ 558,140	\$ 1,092,439	\$ 181,898	\$ 894,683	\$ 1,607,468	\$ 115,673	\$ 652,290	\$ 1,188,907	\$ 83,885	\$ 578,778	\$ 1,073,671
Mental Health Direct Costs	\$ -	\$ 337,254	\$ 674,507	\$ -	\$ 279,034	\$ 558,068	\$ -	\$ 434,286	\$ 868,572	\$ -	\$ 274,838	\$ 549,676
Indirect Investigative Service Costs	\$ 271,928	\$ 1,095,982	\$ 3,845,681	\$ 659,172	\$ 2,739,119	\$ 9,406,535	\$ 199,468	\$ 807,946	\$ 2,498,993	\$ 126,845	\$ 534,811	\$ 1,874,775
Investigative Service Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Legal Court Martial Related Indirect Costs	\$ 4,443,892	\$ 9,551,541	\$ 28,316,888	\$17,165,240	\$ 37,653,376	\$ 120,724,494	\$ 1,813,764	\$ 3,916,646	\$ 11,933,296	\$ 1,218,416	\$ 2,803,832	\$ 8,221,251
Legal Court Martial Related Direct Costs	\$ -	\$ 1,575,350	\$ 8,273,650	\$ -	\$ 6,751,500	\$ 35,458,500	\$ -	\$ 691,225	\$ 3,630,275	\$ -	\$ 466,175	\$ 2,448,325
Administrative Action Costs	\$ 12,634	\$ 31,232	\$ 70,619	\$ 74,925	\$ 181,170	\$ 445,959	\$ 26,583	\$ 63,713	\$ 148,774	\$ 10,764	\$ 26,700	\$ 62,672
Administrative Separation Board Costs	\$ 68,294	\$ 119,852	\$ 257,694	\$ 1,248,818	\$ 2,177,234	\$ 5,068,255	\$ 51,487	\$ 89,691	\$ 197,230	\$ 163,792	\$ 290,107	\$ 649,007
NonJudicial Punishment Costs	\$ 55,710	\$ 130,949	\$ 294,518	\$ 184,635	\$ 424,434	\$ 1,034,812	\$ 42,815	\$ 97,761	\$ 226,724	\$ 27,098	\$ 63,763	\$ 148,546
Expedited Victim Transfer Costs	\$ 205,327	\$ 207,825	\$ 215,019	\$ 315,152	\$ 318,987	\$ 330,029	\$ 205,327	\$ 207,825	\$ 215,019	\$ 57,300	\$ 57,998	\$ 60,005
Subject Discharge Costs (Administrative)	\$ 118,294	\$ 169,852	\$ 307,694	\$ 1,415,068	\$ 2,343,484	\$ 5,234,505	\$ 72,737	\$ 110,941	\$ 218,480	\$ 192,542	\$ 318,857	\$ 677,757
Subject Discharge Costs (Move/Travel)	\$ 205,800	\$ 205,800	\$ 205,800	\$ 1,310,400	\$ 1,310,400	\$ 1,310,400	\$ 100,800	\$ 100,800	\$ 100,800	\$ 193,200	\$ 193,200	\$ 193,200
Subject Discharge Costs (Replacement Recruiting)	\$ 168,933	\$ 288,917	\$ 408,901	\$ 1,075,655	\$ 1,839,634	\$ 2,603,613	\$ 82,743	\$ 141,510	\$ 200,278	\$ 158,590	\$ 271,228	\$ 383,866
Subject Discharge Costs (Replacement Training)	\$ 2,102,100	\$ 2,102,100	\$ 2,102,100	\$11,082,200	\$ 12,010,100	\$ 38,439,800	\$ 1,118,400	\$ 1,118,400	\$ 1,118,400	\$ 2,103,200	\$ 2,180,900	\$ 2,742,900
Victim Resignation Cost (Administrative)	\$ 135,055	\$ 464,530	\$ 937,289	\$ 294,285	\$ 768,730	\$ 1,399,468	\$ 29,121	\$ 242,930	\$ 644,395	\$ 103,041	\$ 243,419	\$ 496,029
Victim Resignation Cost (Move/Travel)	\$ 504,241	\$ 1,734,368	\$ 3,499,461	\$ 1,098,744	\$ 2,870,129	\$ 5,225,055	\$ 108,728	\$ 907,002	\$ 2,405,914	\$ 384,713	\$ 908,830	\$ 1,851,974
Victim Resignation Cost (Replacement Recruiting)	\$ 467,358	\$ 2,641,954	\$ 7,417,936	\$ 1,018,375	\$ 4,372,054	\$ 11,075,741	\$ 100,775	\$ 1,381,632	\$ 5,099,903	\$ 356,572	\$ 1,384,416	\$ 3,925,696
Victim Resignation Cost (Replacement Training)	\$ 5,823,572	\$ 20,030,516	\$ 40,415,893	\$10,853,242	\$ 28,350,749	\$ 51,612,396	\$ 1,286,003	\$10,727,777	\$ 28,456,489	\$ 4,550,275	\$ 11,542,166	\$ 43,946,751
Lowered Productivity	\$ 638,097	\$ 20,422,341	\$ 117,255,051	\$ 1,349,343	\$ 32,032,415	\$ 167,833,618	\$ 41,957	\$ 7,071,790	\$ 54,330,652	\$ 526,025	\$ 13,286,341	\$ 99,765,070
Absenteeism	\$ 1,773,382	\$ 5,101,665	\$ 11,163,359	\$ 2,247,369	\$ 6,547,350	\$ 14,090,236	\$ 342,607	\$ 801,969	\$ 839,328	\$ 1,108,909	\$ 3,605,611	\$ 9,463,990
Totals	\$17,058,709	\$ 67,952,487	\$ 228,325,492	\$51,659,852	\$ 146,252,849	\$ 476,413,610	\$ 5,792,018	\$30,768,394	\$115,867,799	\$ 11,391,195	\$ 39,792,085	\$ 179,580,437

e. Total DoD Costs Related to All Sexual-Assault Incidents

Total estimated DoD organizational costs from all sexual assaults occurring in FY 2012 in the U.S. military are presented in Table 34. DoD numbers account for responses for questions for the DoD as a whole for items where subpopulations responses were treated as “NR” due to small numbers of responses. These questions were regarding victim resignation costs, lowered productivity costs, and absenteeism costs. The responses for the DoD officers in the female and male subpopulations were tabulated and available for calculation, as the population for the DoD was larger than the subgroups. These calculated values were not attributed back to the service populations, but are shown only in the total DoD cost estimates. Therefore, summations of the services to each service in these categories do not equal the DoD total. The costs that are impacted are outlined with a double line in Table 34.

Table 34. DoD Organization Costs Related to All Sexual Assaults in FY 2012 in the U.S. Military

Estimated Cost Range	DoD		
	Minimum	Typical / Average	Maximum
Incident Costs	\$ 15,570	\$ 136,829	\$ 431,542
Initial Report Cost	\$ 162,263	\$ 552,708	\$ 1,236,430
Command & Support Team Meetings	\$ -	\$ 4,211,721	\$ 4,211,721
Medical Indirect Costs	\$ 26,807	\$ 231,677	\$ 436,548
Mental Health Indirect Costs	\$ -	\$ 400,028	\$ 800,056
Medical Direct Costs	\$ 405,297	\$ 2,683,891	\$ 4,962,485
Mental Health Direct Costs	\$ -	\$ 1,325,412	\$ 2,650,823
Indirect Investigative Service Costs	\$ 1,257,413	\$ 5,177,859	\$ 17,625,985
Legal Court Martial Related Indirect Costs	\$24,641,313	\$ 53,925,394	\$ 169,195,929
Legal Court Martial Related Direct Costs	\$ -	\$ 9,484,250	\$ 49,810,750
Administrative Action Costs	\$ 124,907	\$ 302,814	\$ 728,024
Administrative Separation Board Costs	\$ 1,532,391	\$ 2,676,884	\$ 6,172,186
NonJudicial Punishment Costs	\$ 310,258	\$ 716,907	\$ 1,704,599
Expedited Victim Transfer Costs	\$ 783,106	\$ 792,635	\$ 820,073
Subject Discharge Costs (Administrative)	\$ 1,798,641	\$ 2,943,134	\$ 6,438,436
Subject Discharge Costs (Move/Travel)	\$ 1,810,200	\$ 1,810,200	\$ 1,810,200
Subject Discharge Costs (Replacement Recruiting)	\$ 1,485,921	\$ 2,541,289	\$ 3,596,658
Subject Discharge Costs (Replacement Training)	\$16,405,900	\$ 17,411,500	\$ 44,403,200
Victim Resignation Cost (Administrative)	\$ 561,502	\$ 1,819,008	\$ 3,765,486
Victim Resignation Cost (Move/Travel)	\$ 2,096,425	\$ 6,791,448	\$ 14,058,818
Victim Resignation Cost (Replacement Recruiting)	\$ 1,943,080	\$ 10,345,380	\$ 29,800,989
Victim Resignation Cost (Replacement Training)	\$22,513,092	\$ 90,475,491	\$ 504,538,509
Lowered Productivity	\$ 2,646,114	\$ 81,666,343	\$ 506,376,853
Absenteeism	\$ 5,662,655	\$ 17,020,821	\$ 38,439,884
Totals	\$86,182,854	\$ 315,443,623	\$ 1,414,016,181

f. Total Estimated Coast Guard Costs

The Coast Guard organizational costs were calculated using the average incident cost per victim for each reporting category of sexual-assault incidents for the Air Force, DoD, and Army. The Air Force was most similar to the Coast Guard, based on the composition of reported and unreported sexual-assault services, which is one of the drivers of cost per incident. Figure 11. Figure 11 displays the ratios of the numbers of victims in unreported sexual-assault incidents to the number of victims in reported sexual-assault incidents. In addition, using the Air Force average costs provided the lowest average total cost for the Coast Guard of all four DoD services and the DoD

average. The Army provided the highest cost estimate for the Coast Guard and the DoD average cost was in the middle. The organizational cost estimates, along with the average cost per victim of sexual assault for the Coast Guard are presented in Table 35. Because the overall DoD estimated costs represented the average cost per victim of sexual assault in the DoD, these costs were used to determine the USCG total estimated costs, as shown in Table 36.

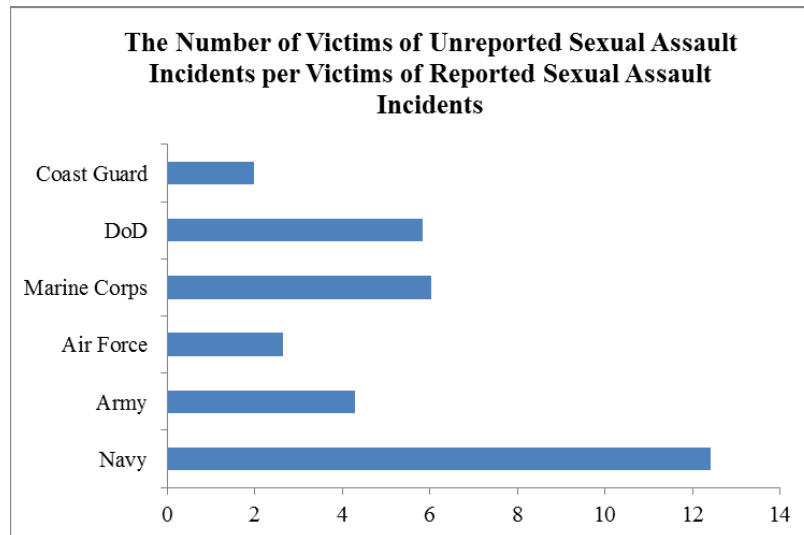


Figure 11. The Number of Victims of Unreported Sexual-Assault Incidents per Victims of Reported of Sexual-Assault Incidents

Table 35. Organization Costs Related to All Sexual Assaults in FY 2012 in the U.S. Coast Guard

Reporting Category	Average Cost Per Victim (\$)			Estimated Number of Victims
	Air Force	DoD	Army	USCG
Unrestricted Report	\$ 18,018	\$ 30,967	\$ 50,665	141
Restricted Report	\$ 2,364	\$ 2,115	\$ 2,088	15
Unreported	\$ 9,051	\$ 9,018	\$ 10,787	308
Estimated Average USCG Costs Using Air Force, DoD, and Army Averages				
Total Costs	\$ 5,364,482	\$ 7,176,313	\$ 10,498,330	
Cost per Victim	\$ 11,559	\$ 15,463	\$ 22,621	464

Table 36. Estimated Organizational Costs Related to All Sexual Assaults in FY 2012 in the U.S. Coast Guard

Reporting Category	DoD Average Cost Per Victim (\$)			Estimated Number of Victims
	Minimum	Average / Typical	Maximum	
Unrestricted Report	\$ 14,779	\$ 30,967	\$ 86,818	141
Restricted Report	\$ 160	\$ 2,115	\$ 3,495	15
Unreported	\$ 2,789	\$ 9,018	\$ 27,392	308
Costs	Estimated USCG Costs Using DoD Estimated Cost per Reporting Category			Estimated Number of Victims
	Minimum	Average / Typical	Maximum	
Total Costs	\$ 2,945,553	\$ 7,176,313	\$ 20,732,862	
Cost per Victim	\$ 6,347	\$ 15,463	\$ 44,674	464

g. Summary and Analysis of Estimated Costs

This research found estimated minimum, average, and maximum organizational costs related to sexual assaults incidents involving active-duty members for each military service. The estimated total organizational costs for the U.S. military are presented in Figure 12 and the total organizational costs per service are summarized in Figure 13. To account for the large difference in the number of active-duty members per branch of service, the organizational costs are also presented as costs per 100,000 active-duty servicemembers in Figure 14 to provide a more equitable comparison of costs.

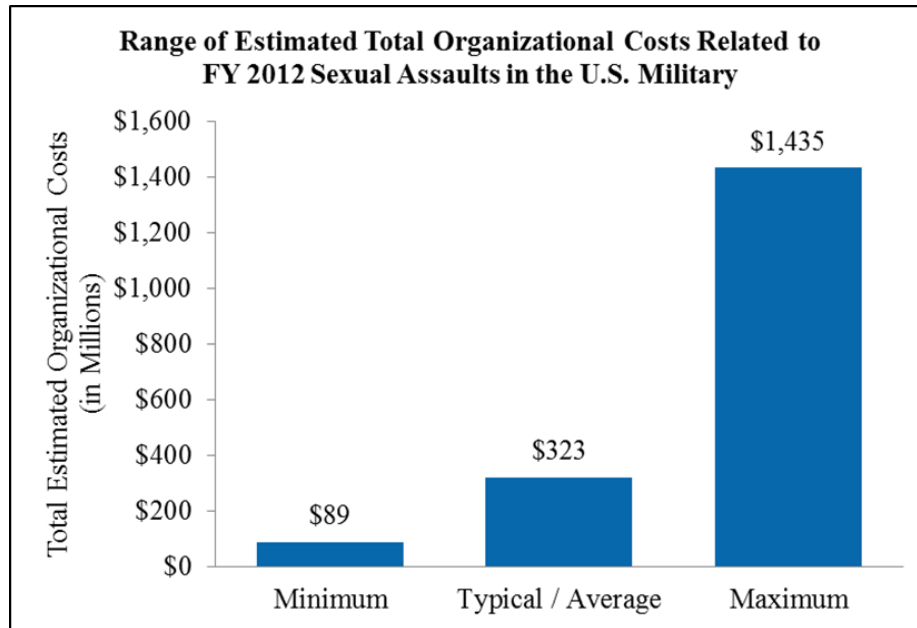


Figure 12. Range of Estimated Total Organizational Costs Related to FY 2012 Sexual Assaults in the U.S. Military

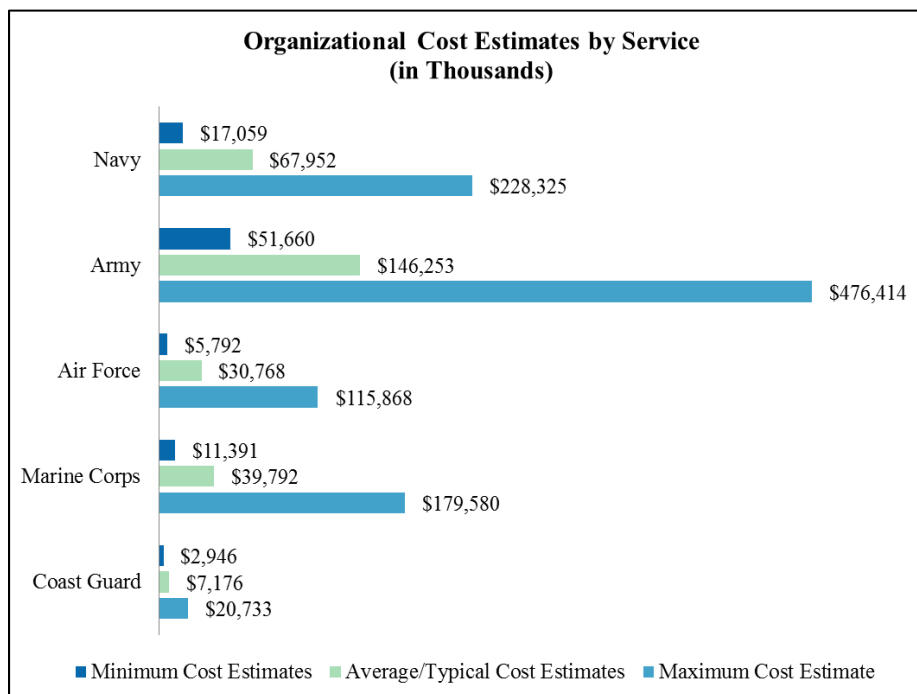


Figure 13. Organizational Cost Estimates from FY 2012 Sexual Assaults by U.S. Military Service

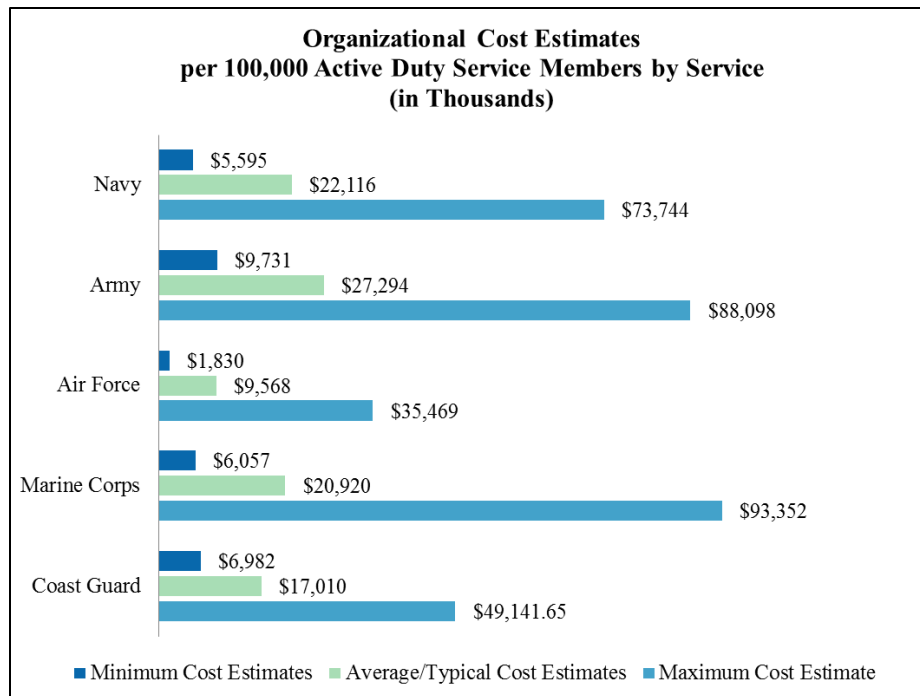


Figure 14. Organizational Cost Estimates per 100,000 Active Duty Service Members from FY 2012 Sexual Assaults by U.S. Military Service

The average organizational costs of sexual-assault incidents involving active-duty personnel that occurred in FY 2012 are presented in Figure 15. This figure also displays the number of victims in reported incidents of sexual assault in FY 2012, as well as numbers of assaults projected to have occurred in each service in FY 2012.

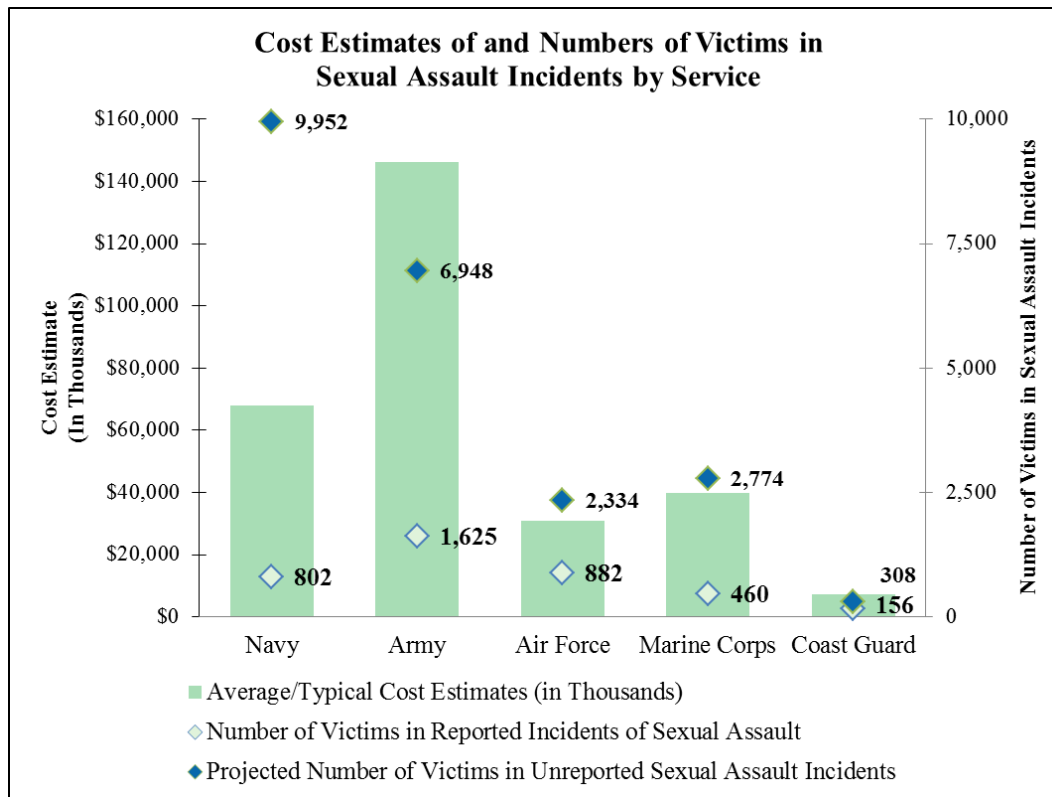


Figure 15. Organizational Cost Estimates of and Numbers of Victims in Sexual-Assault Incidents by U.S. Military Service

Several groups of cost elements are drivers of the total organizational costs related to sexual assaults in the military. The four groups of cost elements are slightly different from the categories listed in the framework in Figure 4. The cost element groups are other costs, case prosecution costs, productivity reduction costs, and separation and replacement costs. The individual cost elements that contribute to the rolled up group costs are presented in Table 37.

Table 37. Cost Elements Contributing to Cost Groups

Other Costs	Productivity Reduction Costs
<ul style="list-style-type: none"> Initial Report Cost Command & Support Team Meetings Medical Indirect Costs Mental Health Indirect Costs Medical Direct Costs Mental Health Direct Costs Expedited Victim Transfer Costs 	<ul style="list-style-type: none"> Incident Costs Lowered Productivity Absenteeism
Case Prosecution Costs	Separation & Replacement Costs
<ul style="list-style-type: none"> Indirect Investigative Service Costs Investigative Service Direct Costs Legal Court Martial Related Indirect Costs Legal Court Martial Related Direct Costs Administrative Action Costs Administrative Separation Board Costs NonJudicial Punishment Costs 	<ul style="list-style-type: none"> Subject Discharge Costs (Administrative) Subject Discharge Costs (Move/Travel) Subject Discharge Costs (Replacement Recruiting) Subject Discharge Costs (Replacement Training) Victim Resignation Cost (Administrative) Victim Resignation Cost (Move/Travel) Victim Resignation Cost (Replacement Recruiting) Victim Resignation Cost (Replacement Training)

Separation and replacement costs, prosecution costs, and productivity costs make up 97 to 99 percent of the estimated organizational costs related to sexual assaults in the U.S. military. [please check, is there an item missing from the list?] The percentages of the total for these groupings vary between the minimum, average, and maximum total cost estimates as shown in Figure 16.

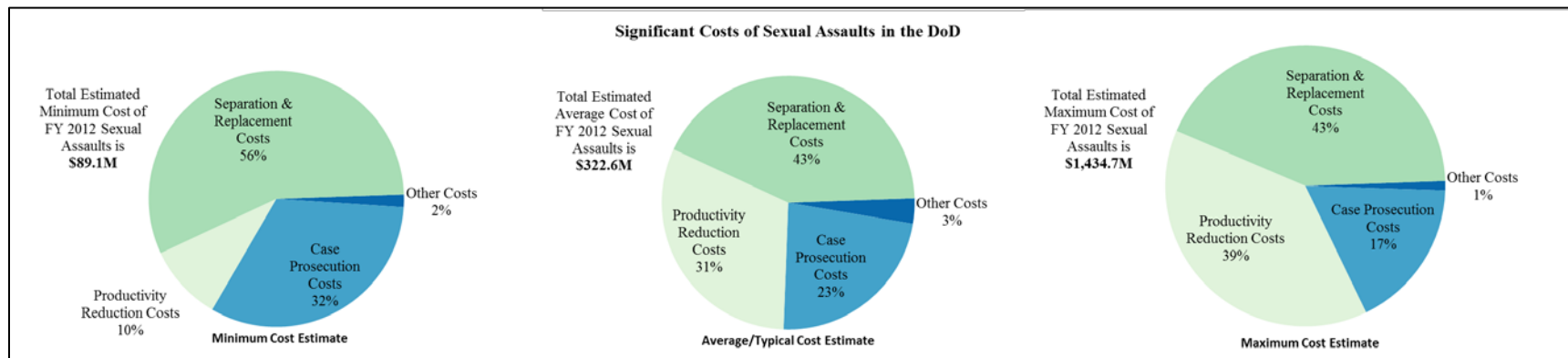


Figure 16. Significant Cost Groups Contributing to Minimum, Average/Typical, and Maximum Total Organizational Costs of Sexual Assaults in the U.S. Military in FY 2012

The average cost per sexual-assault incident in each of the DoD military branches is displayed in Figure 17. This figure also shows the major cost contributors to the aggregate cost per incident.

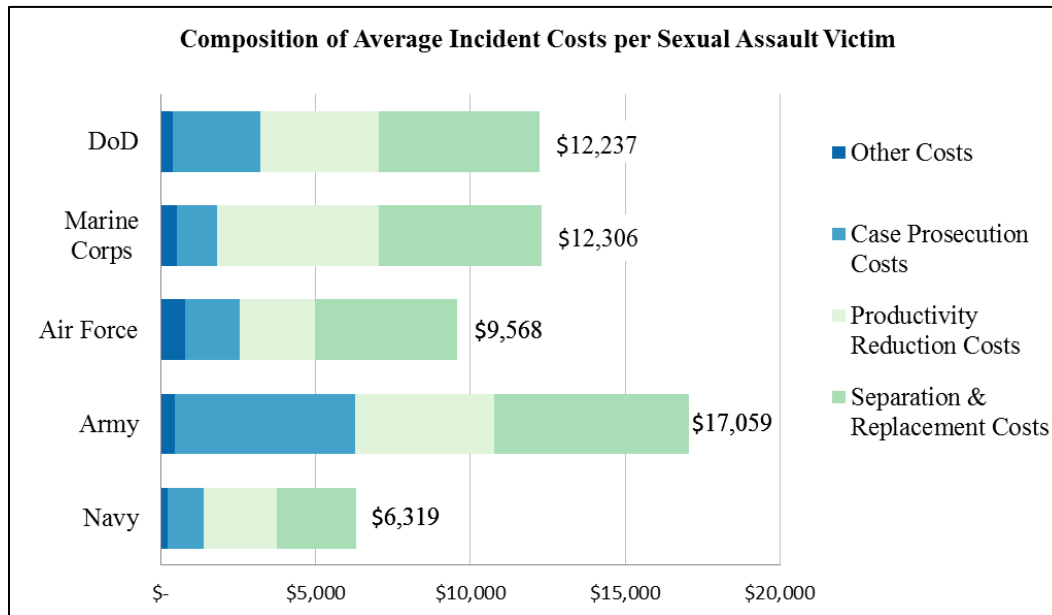


Figure 17. Composition of Average Incident Costs per Sexual-Assault Victim

C. SENSITIVITY ANALYSIS

Further analysis was performed to determine how sensitive study results are to certain research assumptions. The assumptions that were varied in this sensitivity analysis are:

- Vary number of days absent after rape incident
 - Decrease average days absent from work for 20% of rape victims from 8.1 days to 7 days
 - Decrease average days absent from work for 20% of rape victims from 8.1 days to 3 days
 - Increase average days absent from work for 20% of rape victims from 8.1 days to 13 days
 - Increase average days absent from work for 20% of rape victims from 8.1 days to 9 days

- Vary maximum and average timeframe of productivity reduction
 - Decrease maximum timeframe of productivity decrease from 3 years to 2 years and decrease average productivity decrease from 1.63 years to 1.13 years
 - Increase maximum timeframe of productivity decrease from 3 years to 4 years and increase average productivity decrease from 1.63 years to 2.13 years
- Vary recruiting costs and training costs from marginal costs to full costs
 - Increase recruiting costs from marginal to full costs (assume full costs are 2* marginal costs).
 - Increase recruiting costs from marginal to full costs (assume full costs are 2* marginal costs).

a. Results

Each of the assumptions is changed independently, with all other assumptions remaining unchanged. The percent change for the minimum, average/typical, and maximum DoD total estimated organizational costs for each varied assumption are presented tables 38, 39, and 40.

Table 38. Sensitivity Analysis Results for Absenteeism Assumption Variation

Assumption Varied	Percent Change in Total DoD Cost		
	Average / Typical		
	Minimum Cost	Cost	Maximum Cost
Decrease Absenteeism by 1 day	-0.9%	-0.7%	-0.3%
Decrease Absenteeism by 5 days	-4.0%	-3.2%	-1.6%
Increase Absenteeism by 1 day	0.7%	0.6%	0.3%
Increase Absenteeism by 5 days	3.9%	3.1%	1.5%

Table 39. Sensitivity Analysis Results for Productivity Assumption Variation

Assumption Varied	Percent Change in Total DoD Cost		
	Minimum Cost	Average / Typical Cost	Maximum Cost
Decrease Maximum Productivity	0.0%	-7.9%	-11.9%
Decrease Timeline by 1 year			
Increase Maximum Productivity	0.0%	7.8%	11.9%
Decrease Timeline by 1 year			

Table 40. Sensitivity Analysis Results for Recruiting and Training Assumption Variation

Assumption Varied	Percent Change in Total DoD Cost		
	Minimum Cost	Average / Typical Cost	Maximum Cost
Increase recruiting costs from marginal to full costs	2.2%	9.8%	2.1%
Increase training costs from marginal to full costs	0.0%	6.5%	25.3%

D. STUDY LIMITATIONS

There are large differences between the calculated minimum, average/typical, and maximum organizational costs related to sexual assaults in the U.S. military, as shown in Figure 12. There are several factors that contribute to the wide range for the calculated answer to the research question, what is the estimated aggregate total annual dollar cost (in 2012 dollars) of sexual assaults committed against or by a uniformed member of one of the five U.S. military services in 2012.

One of the main reasons for the wide range of the total cost estimate is the lack of available data for some of the main cost drivers. For example, I was unable to locate data on the cost of courts-martial proceedings. This led me to get information from subject-matter experts. However, the experts do not track how much time is spent by various individuals on cases they are involved in. The information I obtained from the experts helped me develop a framework to calculate minimum and maximum costs associated with courts-martial proceedings and all the events surrounding these proceedings.

However, I was unable to pinpoint an actual average cost for case prosecution. Available investigative-cost data, victim-services-cost data, and to some extent, medical- and mental-health-cost data also led to a large spread for those elements.

FY 2012 WGRA tabulated results were used throughout the research study. Variability was added into estimated organizational costs of sexual assault in the military due to the margins of error taken into account from tabulated survey results. In addition, WGRA tabulated results are reported for subgroups of the population. Because response data was summarized by subgroups instead of individual responses, I calculated minimum estimates as if every respondent was in the lowest pay grade in the subgroup. Similarly, I calculated maximum estimates for cost elements that used WGRA data as if each individual in the subgroup was highest pay grade in the group. Using these two extremes spread out the range of cost estimates that are thought to contain the true answer.

Lastly, sexual-assault incidents vary greatly in complexity. How victims respond to assaults varies greatly. How sexual assault cases are adjudicated varies greatly. What support services victims need and use varies greatly. These and many other variables create significant unknowns for which large variability must be assumed throughout the estimation process.

As stated earlier in this chapter, I have different levels of certainty and confidence with the data I used and the application of the data. Levels of uncertainty for estimates of categories of significant costs of sexual assault are presented in Figure 18.

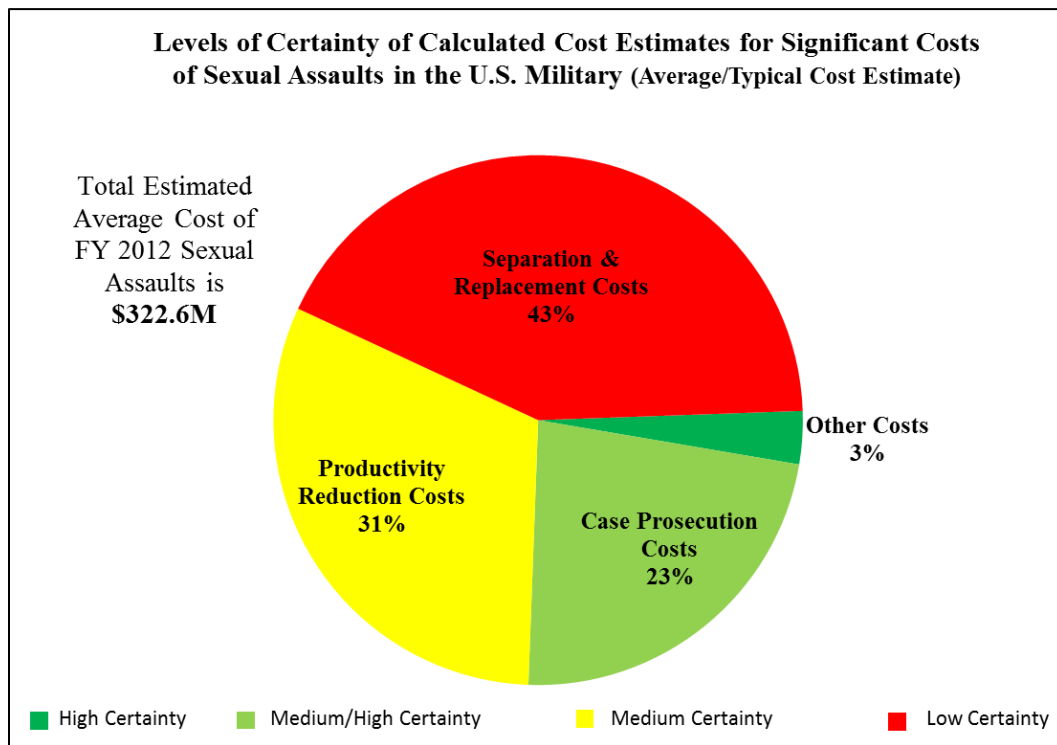


Figure 18. Levels of Certainty for Cost Estimates of Significant Costs of Sexual Assault in the U.S. Military

V. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION

This study adds to the study of affects of sexual assault on the workplace by using cost estimation methodologies to quantify costs related to sexual assault that were ignored in previous studies. In particular, the analysis of data obtained from the legal and investigative communities revealed interesting results. There are still numerous research areas on this topic that I hope others pursue to calculate more precise cost estimates for leadership.

This research presents a framework of organizational costs resulting from sexual assaults in the U.S. military and aggregated cost estimates accounting for many of the contributing cost elements. Analysis found separation and replacement costs, productivity reduction costs, and case prosecution costs contribute up to 99% of the aggregate estimated organizational costs due to sexual assault in the U.S. military. However, I placed a high uncertainty on my results for separation and replacement costs and a medium uncertainty on productivity reduction costs due to lack of sufficient data in these areas. Additionally, the aggregated costs estimates calculated in this study resulted in a \$1.3 billion difference in organizational costs from the minimum estimated cost of \$89 million to the maximum estimated cost of \$1.435 billion. The average estimated organizational cost of sexual assault from FY 2012 incidents is \$323 million.

By understanding the magnitude of the organizational costs resulting from sexual assaults that occurred by or against active duty members of the U.S. military in one year, decision makers have an additional tool to evaluate sexual assault prevention and response strategies and policies. Hopefully, this additional piece of information will make a difference in the fight to eradicate sexual assault from the ranks of the U.S. military.

B. RECOMMENDATIONS

Chapter IV provides details on the limitations of this research study. Some of those limitations may be addressed through the following recommendations and follow-on areas of research:

- I recommend future research efforts be focused on cost elements and cost groups that make up significant percentages of the aggregate total cost and have a high or medium degree of uncertainty. Based on this study, those cost groups are separation and replacement costs and productivity reduction costs.
- Further prosecution-data collection and analysis is recommended, because case prosecution cost estimates in this research study were based on limited data samples. The data used was based on individuals' recollections of how long various aspects of case investigations, command actions, or case prosecutions took. A formal survey or a request for investigative and JAG offices to track time expenditures on sexual assault cases would increase the reliability of case prosecution cost estimates.
- The aggregated cost estimates calculated in this study provide a starting point for future refinement. At the time of this study, the 2012 WGRA survey results data set was unavailable for analysis because the results were still being analyzed and briefed internally within the DoD. Using the complete survey response data set for future research instead of the tabulated version used in this study should decrease the spread between the minimum and maximum estimated organizational costs.
- The DoD and USCG SAPRO collect data on all reported sexual assaults. More accurate cost estimates and a better understanding of how much time is spent by personnel responding to sexual-assault incidents would come from addition of data fields in sexual assault case files to collect time spent on various aspects of sexual-assault incident response.

APPENDIX A. EXCERPTS FROM 2012 WGRA SURVEY QUESTIONNAIRE

2012 Workplace and Gender Relations Survey of Active Duty Members

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

d. Your job gives you the chance to acquire valuable skills.....

e. You are satisfied with your job as a whole.....

f. Your day-to-day work is directly tied to your wartime job.....

18. Overall, how satisfied are you with the military way of life?

☒ Very satisfied

☒ Satisfied

☒ Neither satisfied nor dissatisfied

☒ Dissatisfied

☒ Very dissatisfied

15. Overall, how well prepared... Mark one answer for each item.

Very poorly prepared

Poorly prepared

Neither well nor poorly prepared

Well prepared

Very well prepared

a. Are you to perform your wartime job?

b. Is your unit to perform its wartime mission?

19. How often during the past 12 months have you experienced any of the following behaviors where coworkers or supervisors... Mark one answer for each item.

Very often

Often

Sometimes

Once or twice

Never

a. Intentionally interfered with your work performance?

b. Did not provide information or assistance when you needed it?

c. Were excessively harsh in their criticism of your work performance?

d. Took credit for work or ideas that were yours?

e. Gossiped/talked about you?

f. Used insults, sarcasm, or gestures to humiliate you?

g. Yelled when they were angry with you?

h. Swore at you in a hostile manner?

i. Damaged or stole your property or equipment?

16. Overall, how would you rate... Mark one answer for each item.

Very low

Low

Moderate

High

Very high

a. Your current level of morale?

b. The current level of morale in your unit?

STRESS, HEALTH, AND WELL-BEING

20. How true or false is each of the following statements for you? Mark one answer for each statement.

Definitely true

Mostly true

Mostly false

Definitely false

a. I am as healthy as anybody I know.

b. I seem to get sick a little easier than other people.

Figure 19. Excerpt from 2012 WGRA Survey: Questions 15 through 20
(from DMDC, 2013)

	Very often	Often	Sometimes	Once or twice	Never
s. Other unwanted gender-related behavior?.....	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Ask if Q30 s = "Once or twice" OR Q30 s = "Sometimes" OR Q30 s = "Often" OR Q30 s = "Very often"] Please describe the other unwanted gender-related behaviors you've experienced during the past 12 months.

31. [Ask if Any Q30 a-p = "Once or twice" OR Any Q30 a-p = "Sometimes" OR Any Q30 a-p = "Often" OR Any Q30 a-p = "Very often"] How many of these behaviors that you marked as happening to you, do you consider to have been sexual harassment?

- ☒ None were sexual harassment
☒ Some were sexual harassment; some were not sexual harassment
☒ All were sexual harassment

UNWANTED SEXUAL CONTACT

32. In the past 12 months, have you experienced any of the following intentional sexual contacts that were against your will or occurred when you did not or could not consent where someone...

- Sexually touched you (e.g., intentional touching of genitalia, breasts, or buttocks) or made you sexually touch them?
- Attempted to make you have sexual intercourse, but was not successful?
- Made you have sexual intercourse?
- Attempted to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful?
- Made you perform or receive oral sex, anal sex, or penetration by a finger or object?

- ☒ Yes
☒ No

33. [Ask if Q32 = "Yes"] In the past 12 months, how many separate incidents of sexual touching, attempted or completed intercourse, oral or anal sex, or penetration by a finger or object did you experience? To indicate nine or more, select "9".

- ☒ 1
☒ 2
☒ 3
☒ 4
☒ 5
☒ 6
☒ 7
☒ 8
☒ 9 or more

Think about the situation(s) you experienced in the past 12 months that involved the behaviors in the previous question. Tell us about the one event that had the greatest effect on you.

34. [Ask if Q32 = "Yes"] What did the person(s) do during the situation? *Mark one answer for each behavior.*

	Did this	Did not do this
a. <u>Sexually touched you</u> (e.g., intentional touching of genitalia, breasts, or buttocks) or made you sexually touch them	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. <u>Attempted</u> to make you have sexual intercourse, but was not successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. <u>Made you</u> have sexual intercourse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
d. <u>Attempted</u> to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e. <u>Made you</u> perform or receive oral sex, anal sex, or penetration by a finger or object	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

35. [Ask if Q32 = "Yes"] Did the situation occur... *Mark "Yes" or "No" for each item.*

	Yes	No
a. At a military installation?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. During your work day/duty hours?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. While you were on TDY/TAD, at sea, or during field exercises/alerts?.....	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
d. While you were deployed to a combat zone or to an area where you drew imminent danger pay or hostile fire pay?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e. During the delayed entry program?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
f. During recruit training/basic training?.....	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 20. Excerpt from 2012 WGRA Survey: Questions 31 through 35 (from DMDC, 2013)

		Yes	No
g.	During any type of military combat training?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
h.	During Officer Candidate or Training School/Basic or Advanced Officer Course?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
i.	During military occupational specialty school/technical training/advanced individual training/professional military education?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

36. [Ask if Q32 = "Yes"] How many offender(s) were involved? **Mark one.**

☒ One person

☒ More than one person

☒ Not sure

37. [Ask if Q32 = "Yes"] What was/were the gender(s) of the offender(s)? **Mark one.**

☒ Male only

☒ Female only

☒ Both male and female

☒ Not sure

38. [Ask if Q32 = "Yes"] Was the offender(s)... **Mark "Yes" or "No" for each item.**

		Yes	No
a.	Someone in your chain of command?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Other military person(s) of higher rank/grade who was not in your chain of command?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Your military coworker(s)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Your military subordinate(s)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Other military person(s)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
f.	DoD/Service civilian employee(s)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
g.	DoD/Service civilian contractor(s)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Your spouse/significant other?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
i.	Person(s) in the local community?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
j.	Unknown person(s)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

39. [Ask if Q32 = "Yes"] Did the offender(s) use drugs to knock you out (e.g., date rape drugs, sedatives)?

☒ Yes

☒ No

☒ Not sure

40. [Ask if Q32 = "Yes"] Had either you or the offender(s) been drinking alcohol before the incident?

☒ Yes

☒ No

41. [Ask if Q32 = "Yes"] Had either you or the offender(s) been using drugs before the incident?

☒ Yes

☒ No

42. [Ask if Q32 = "Yes"] Did the offender(s)... **Mark "Yes" or "No" for each item.**

		Yes	No
a.	Threaten to ruin your reputation if you did not consent?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Threaten to physically harm you if you did not consent?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Use some degree of physical force (e.g., holding you down)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

43. [Ask if Q32 = "Yes"] Did the offender(s)... **Mark "Yes" or "No" for each item.**

		Yes	No
a.	Sexually harass you <u>before</u> the situation?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Stalk you <u>before</u> the situation?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Sexually harass you <u>after</u> the situation?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Stalk you <u>after</u> the situation?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

44. [Ask if Q32 = "Yes"] As a result of this situation, to what extent did... **Mark one answer for each item.**

		Very large extent	Large extent	Moderate extent	Small extent	Not at all
a.	You consider requesting a transfer?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b.	You think about getting out of your Service?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Your work performance decrease?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 21. Excerpt from 2012 WGRA Survey: Questions 36 through 44 (from DMDC, 2013)

45. [Ask if Q32 = "Yes"] Did you report this situation to a civilian authority or organization?

☒ Yes

☒ No

DoD provides two types of reporting of sexual assault. Unrestricted reporting is for victims who want medical treatment, counseling, and an official investigation of the assault. Restricted reporting is for victims who want information and to receive medical treatment and counseling without prompting an official investigation of the assault.

46. [Ask if Q32 = "Yes"] Did you report this situation to an installation/Service/DoD authority or organization?

☒ Yes

☒ No

DoD provides two types of reporting of sexual assault. Unrestricted reporting is for victims who want medical treatment, counseling, and an official investigation of the assault. Restricted reporting is for victims who want information and to receive medical treatment and counseling without prompting an official investigation of the assault.

47. [Ask if Q32 = "Yes" AND Q46 = "Yes"] Did you make... **Mark one.**

☒ Only a restricted report?

☒ Only an unrestricted report?

☒ A restricted report that was converted to an unrestricted report?

48. [Ask if Q32 = "Yes" AND Q46 = "Yes" AND (Q47 = "Only an unrestricted report?" OR Q47 = "A restricted report that was converted to an unrestricted report?")] How satisfied have you been with your treatment by the... **Mark one answer for each item.**

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Does not apply
a. Sexual Assault Victims' Advocate assigned to you?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Sexual Assault Response Coordinator (SARC) handling your report?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Does not apply
c. Commander handling your report?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
d. Criminal investigator(s) handling your report?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e. Trial Defense Office personnel?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
f. Legal Office personnel (prosecution)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
g. Legal assistance (not prosecution)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
h. Medical personnel?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
i. Chaplain?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
j. Safe Helpline staff?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

49. [Ask if Q32 = "Yes" AND Q46 = "Yes" AND (Q47 = "Only an unrestricted report?" OR Q47 = "A restricted report that was converted to an unrestricted report?") AND (Q48 a = "Dissatisfied" OR Q48 a = "Very dissatisfied")] Please specify why you were dissatisfied with the treatment you received from the Sexual Assault Victims' Advocate assigned to you.

50. [Ask if Q32 = "Yes" AND Q46 = "Yes" AND (Q47 = "Only an unrestricted report?" OR Q47 = "A restricted report that was converted to an unrestricted report?") AND (Q48 b = "Dissatisfied" OR Q48 b = "Very dissatisfied")] Please specify why you were dissatisfied with the treatment you received from the Sexual Assault Response Coordinator (SARC) handling your report.

Figure 22. Excerpt from 2012 WGRA Survey: Questions 45 through 50 (from DMDC, 2013)

APPENDIX B. FY 2012 U.S. NAVY SEXUAL ASSAULT STATISTICS

Table 41. U.S. Navy FY 2012 Summary of Sexual Assault Reports Involving Service Members (from Department of Defense, 2013)

US Navy - FISCAL YEAR 2012 SUMMARY OF UNRESTRICTED SEXUAL ASSAULT REPORTS INVOLVING SERVICE MEMBERS		FY12 Totals
Total Service Member victims in all investigations closed in FY12*		447
Service Member victims whose reports of sexual assault could be substantiated*		279
Total Service Member subjects in all investigations closed in FY12**		395
Service Member subjects against whom sexual assault reports could be substantiated**		176
Sexual Assault Investigations Involving Service Members Opened and Completed in FY12		FY12 Totals
# Service Member victims identified in investigations initiated and closed in FY12*		195
# Service Member victims whose reports of sexual assault could be substantiated*		112
# Service Member subjects identified in investigations initiated and closed in FY12		161
# Service Member subjects against whom sexual assault reports could be substantiated		54
Sexual Assault Investigations Involving Service Members Opened Prior to FY12 and Completed in FY12		FY12 Totals
# Service Member victims identified in Pre-FY12 investigations closed in FY12*		252
# Service Member victims whose reports of sexual assault could be substantiated*		167
# Service Member subjects identified in Pre-FY12 investigations closed in FY12		234
# Service Member subjects against whom sexual assault reports could be substantiated		122
*Does not include victims from Restricted Reports, per mandate in PL 111-383; Also does not include victims from investigations where command action had yet to be reported. Also does not include victims from investigations where command action had yet to be reported.		
**Does not include subjects from investigations where command action had yet to be reported.		
FISCAL YEAR 2012 SUMMARY OF RESTRICTED SEXUAL ASSAULT REPORTS INVOLVING SERVICE MEMBERS		FY12 Totals
# Service Member Victims initially making Restricted Reports		246
# Service Member Victims who converted from Restricted Report to Unrestricted Report in the current FY*		47
# Service Member Victim Reports Remaining Restricted		199

Table 42. U.S. Navy FY 2012 Unrestricted Reports of Sexual Assaults Involving Service Members: Sections A-C (from Department of Defense, 2013)

US Navy FY12 UNRESTRICTED REPORTS OF SEXUAL ASSAULTS IN THE MILITARY	
A. FY12 REPORTS OF SEXUAL ASSAULT (rape, aggravated sexual assault, aggravated sexual contact, abusive sexual contact, wrongful sexual contact, non-consensual sodomy, and attempts to commit these offenses) BY or AGAINST Service Members.	FY12 Totals
Note: The data about Unrestricted Reports in Sections A and B below is raw, uninvestigated information about allegations received during FY12. These Reports may not be fully investigated by the end of the fiscal year.	
# VICTIMS in FY12 Unrestricted Reports	556
# Service Member victims	480
# Non-Service Member victims	76
# Unrestricted Reports in the following categories	527
# Service Member on Service Member	365
# Service Member on Non-Service Member	72
# Non-Service Member on Service Member	28
# Unidentified Subject on Service Member	62
# Unrestricted Reports of sexual assault occurring	527
# On military installation	243
# Off military installation	241
# Unidentified location	43
# Investigations Initiated (From FY12 Unrestricted Reports)	527
# Investigations pending completion as of 30-SEP-12	195
# Completed Investigations as of 30-SEP-12	332
# All Restricted Reports received in FY12	246
# Converted from Restricted Report to Unrestricted Report*	47
# FY12 RESTRICTED REPORTS REMAINING RESTRICTED	199
B. DETAILS OF UNRESTRICTED REPORTS RECEIVED IN FY12	FY12 Totals
Length of time between sexual assault and Unrestricted Report	527
# Reports made within 3 days of sexual assault	171
# Reports made within 4 to 30 days after sexual assault	126
# Reports made within 31 to 365 days after sexual assault	141
# Reports made longer than 365 days after sexual assault	44
# Unknown	45
Time of sexual assault	527
# Midnight to 6 am	75
# 6 am to 6 pm	24
# 6 pm to midnight	40
# Unknown	388
Day of sexual assault	527
# Sunday	66
# Monday	31
# Tuesday	25
# Wednesday	26
# Thursday	41
# Friday	56
# Saturday	104
# Unknown	178
C. SUMMARY OF ALL INVESTIGATIONS OF UNRESTRICTED REPORTS COMPLETED IN FY12	FY12 Totals
# Total Investigations completed during FY12	621
# Investigations opened in FY12 and completed in FY12	332
# Of these investigations with more than one victim, more than one subject, or both	31
# Investigations opened prior to FY12 and completed in FY12	289
# Of these investigations with more than one victim, more than one subject, or both	30
# SUBJECTS in all investigations completed during FY12	659
# Service Member subjects in completed investigations	553
# Your Service Member subjects investigated by your Service	536
# Other Service Member subjects investigated by your Service	17
# Non-Service Member subjects in your Service's investigations	36
# Unidentified subjects in your Service's investigations	70
# VICTIMS in all investigations completed during FY12	687
# Service Member victims	590
# Service Member victims own Service's investigations	574
# Other Service Member victims in your Service's investigations	16
# Non-Service Member victims in your Service's investigations	97
# Unidentified victims in your Service's investigations	0

Table 43. U.S. Navy FY 2012 Unrestricted Reports of Sexual Assaults Involving Service Members: Section D
(from Department of Defense, 2013)

D. FINAL DISPOSITIONS FOR SUBJECTS IN COMPLETED FY12 INVESTIGATIONS	FY12 Totals	D1. ASSOCIATED VICTIM DATA FOR COMPLETED FY12 INVESTIGATIONS	FY12 Totals
# Investigations opened in FY12 and completed in FY12	332	# VICTIMS in investigations opened in FY12 and completed in FY12	356
# SUBJECTS in investigations opened in FY12 and completed in FY12	354	# Service Member Victims in investigations opened and completed in FY12	309
# Service Member Subjects in investigations opened and completed in FY12	285	# Total Victims associated with MCIO unfounded allegations	0
# Total Subjects with allegations unfounded by a Military Criminal Investigative Organization	0	# Service Member Victims involved in MCIO unfounded allegations	0
# Service Member Subjects with allegations unfounded by MCIO	0	# Non-Service Member Victims involved in MCIO unfounded allegations	0
# Non-Service Member Subjects with allegations unfounded by MCIO	0		
# Total Subjects Outside DoD Prosecutive Authority	81		
# Unknown Offenders	70	# Service Member Victims in substantiated Unknown Offender Reports	58
		# Service Member Victims in remaining Unknown Offender Reports	0
# US Civilians or Foreign National Subjects not Subject to the UCMJ	5	# Service Member Victims in substantiated Civilian/Foreign National Subject Reports	6
		# Service Member Victims in remaining Civilian/Foreign National Subject Reports	0
# Service Members Prosecuted by a Civilian or Foreign Authority	4	# Service Member Victims in substantiated reports against a Service member who is being Prosecuted by a Civilian/Foreign Authority	0
# Subjects who died or deserted	2	# Service Member Victims in substantiated reports with a deceased or deserted subject	1
		# Service Member Victims in remaining reports with a deceased or deserted subject	0
# Total Command Action Precluded or Declined for Sexual Assault	95		
# Service Member Subjects where victim declined to participate in the military justice action	35	# Service member victims who declined to participate in the military justice action	27
# Service Member Subjects whose investigations had insufficient evidence to prosecute	32	# Service member victims in investigations having insufficient evidence to prosecute	32
# Service Member Subjects whose cases involved expired statute of limitations	3	# Service members victims whose cases involved expired statute of limitations	1
# Service Member Subjects with allegations that were unfounded by Command	25	# Service member victims whose allegations were unfounded by Command	23
# Service Member Subjects with victims who died before completion of military justice action	0	# Service member victims who died before completion of the military justice action	0
# Subjects still awaiting command action as of 30-SEP-12	124	# Service Member Victims still awaiting command action on a subject as of 30-SEP-12	114
# Subjects for whom command action was completed as of 30-SEP-12	54		
# FY12 Service Member Subjects where evidence supported Command Action	54	# FY12 Service Member Victims in cases where evidence supported Command Action	47
# Service Member Subjects: Courts-Martial charge preferred (Initiated)	18	# Service Member Victims involved with Court-martial preferals (Initiations) against subject	16
# Service Member Subjects: Nonjudicial punishments (Article 15 UCMJ)	16	# Service Member Victims involved with Nonjudicial punishments (Article 15) against subject	12
# Service Member Subjects: Administrative discharges	1	# Service Member Victims involved with Administrative discharges against subject	1
# Service Member Subjects: Other adverse administrative actions	6	# Service Member Victims involved with Other administrative actions against subject	6
# Service Member Subjects: Courts-Martial charge preferred for non-sexual assault offense	2	# Service Member Victims involved with Court-martial preferals for non-sexual assault offenses	2
# Service Member Subjects: Non-judicial punishment for non-sexual assault offense	10	# Service Member Victims involved with Nonjudicial punishment for non-sexual assault offenses	9
# Service Member Subjects: Administrative discharges for non-sexual assault offense	1	# Service Member Victims involved with administrative discharges for non-SA offense	1
# Service Member Subjects: Other adverse administrative actions for non-sexual assault offense	0	# Service Member Victims involved with Other administrative actions for non-SA offense	0

Table 44. U.S. Navy FY 2012 Unrestricted Reports of Sexual Assaults Involving Service Members: Section E
(from Department of Defense, 2013)

E. FINAL DISPOSITIONS FOR SUBJECTS IN Pre-FY12 INVESTIGATIONS (Prior year investigations completed in FY12)		FY12 Totals	E1. ASSOCIATED VICTIM DATA FOR COMPLETED Pre-FY12 INVESTIGATIONS		FY12 Totals
# Total Number of Pre-FY12 Investigations pending completion at the end of FY11 (30-Sep-11)		293			
# Pre-FY12 Investigations STILL PENDING completion as of 30-SEP-12		4			
# Pre-FY12 Investigations completed of 30-SEP-12		289			
# SUBJECTS in Pre-FY12 investigations completed by 30-SEP-12		305	# VICTIMS in investigations opened prior to FY12 and completed in FY12		331
# Service Member Subjects in Pre-FY12 investigations completed in FY12		268	# Service Member Victims in investigations opened prior to FY12 and completed in		281
# Total Pre-FY12 Subjects with allegations unfounded by a Military Criminal Investigative		0	# Total Pre-FY12 Victims associated with MCIO unfounded allegations		0
# Service Member Subjects with allegations unfounded by MCIO		0	# Service Member Victims involved in MCIO unfounded allegations		0
# Non-Service Member Subjects with allegations unfounded by MCIO		0	# Non-Service Member Victims involved in MCIO unfounded allegations		0
# Total Pre-FY12 Subjects Outside DoD Prosecutive Authority		43			
# Unknown Offenders		21	# Service Member Victims in substantiated Unknown Offender Reports		20
			# Service Member Victims in remaining Unknown Offender Reports		0
# US Civilians or Foreign National Subjects not Subject to the UCMJ		14	# Service Member Victims in substantiated Civilian/Foreign National Subject Reports		14
			# Service Member Victims in remaining Civilian/Foreign National Subject Reports		0
# Service Members Prosecuted by a Civilian or Foreign Authority		6	# Service Member Victims in substantiated reports against a Service member who is being Prosecuted by a Civilian/Foreign Authority		6
# Subjects who died or deserted		2	# Service Member Victims in substantiated reports with a deceased or deserted subject		5
			# Service Member Victims in remaining reports with a deceased or deserted subject		0
# Total Command Action Precluded or Declined for Sexual Assault		106			
# Service Member Subjects where victim declined to participate in the military justice action		29	# Service member victims who declined to participate in the military justice action		23
# Service Member Subjects whose investigations had insufficient evidence to prosecute		52	# Service member victims in investigations having insufficient evidence to prosecute		48
# Service Member Subjects whose cases involved expired statute of limitations		1	# Service member victims whose cases involved expired statute of limitations		1
# Service Member Subjects with allegations that were unfounded by Command		24	# Service member victims whose allegations were unfounded by Command		13
# Service Member Subjects with victims who died before completion of military justice action		0	# Service member victims who died before completion of the military justice action		0
# Subjects still awaiting command action as of 30-SEP-12		34	# Service member victims still awaiting command action on a subject as of 30-Sep-12		29
# Subjects for whom command action was completed as of 30-SEP-12		122			
# Pre-FY12 Service Member Subjects where evidence supported Command Action		122	# Pre-FY12 Service Member Victims in cases where evidence supported Command Action		122
# Service Member Subjects: Courts-Martial charge preferred (Initiated)		81	# Service Member Victims involved with Court-martial preferrals (Initiations) against subject		82
# Service Member Subjects: Nonjudicial punishments (Article 15 UCMJ)		11	# Service Member Victims involved with Nonjudicial punishments (Article 15) against subject		11
# Service Member Subjects: Administrative discharges		2	# Service Member Victims involved with Administrative discharges against subject		1
# Service Member Subjects: Other adverse administrative actions		2	# Service Member Victims involved with Other administrative actions against subject		2
# Service Member Subjects: Courts-Martial charge preferred for non-sexual assault offense		9	# Service Member Victims involved with Court-martial preferrals for non-sexual assault offenses		12
# Service Member Subjects: Non-judicial punishment for non-sexual assault offense		11	# Service Member Victims involved with Nonjudicial punishment for non-sexual assault offenses		8
# Service Member Subjects: Administrative discharges for non-sexual assault offense		2	# Service Member Victims involved with administrative discharges for non-SA offense		2
# Service Member Subjects: Other adverse administrative actions for non-sexual assault offense		4	# Service Member Victims involved with Other administrative actions for non-SA offense		4

APPENDIX C. DOD FY 2012 PAY TABLES

Table 45. DoD FY 2012 Annual Composite Pay Rates

Paygrade	Department of the Navy Annual DoD Composite Rate	Department of the Army Annual DoD Composite Rate	Department of the Air Force Annual DoD Composite Rate	U.S. Marine Corps Annual DoD Composite Rate
O-10	\$295,272	\$295,240	\$302,793	\$305,390
O-9	\$298,682	\$298,409	\$310,406	\$306,749
O-8	\$276,318	\$275,574	\$278,624	\$288,497
O-7	\$247,850	\$245,980	\$253,904	\$255,324
O-6	\$228,029	\$232,064	\$222,130	\$224,170
O-5	\$195,933	\$193,920	\$189,607	\$191,597
O-4	\$176,448	\$166,273	\$166,559	\$165,553
O-3	\$151,715	\$132,959	\$140,582	\$138,835
O-2	\$119,393	\$106,997	\$114,651	\$112,391
O-1	\$93,767	\$85,616	\$91,654	\$83,580
W-5	\$184,188	\$191,550	\$0	\$177,993
W-4	\$164,626	\$162,748	\$0	\$157,704
W-3	\$147,002	\$139,175	\$0	\$137,058
W-2	\$129,592	\$117,717	\$0	\$121,804
W-1	\$0	\$103,267	\$0	\$110,344
E-9	\$145,320	\$148,501	\$141,266	\$142,135
E-8	\$122,138	\$122,739	\$120,488	\$116,326
E-7	\$109,136	\$108,292	\$107,647	\$103,422
E-6	\$95,664	\$91,901	\$93,337	\$90,508
E-5	\$82,231	\$76,381	\$79,393	\$73,557
E-4	\$67,867	\$62,996	\$65,526	\$60,758
E-3	\$56,206	\$54,193	\$51,994	\$52,555
E-2	\$51,414	\$49,812	\$47,651	\$47,580
E-1	\$48,237	\$45,041	\$41,957	\$43,622
Cadets	\$17,495	\$17,373	\$17,181	\$0

Table 46. GS Hourly Wage Rates Used
for Project

Grade	Hourly Wage	Total Hourly Rate*
GS-1	\$11.63	\$15.19
GS-2	\$12.66	\$16.54
GS-3	\$14.27	\$18.64
GS-4	\$16.02	\$20.92
GS-5	\$17.92	\$23.40
GS-6	\$19.98	\$26.09
GS-7	\$22.20	\$29.00
GS-8	\$24.59	\$32.11
GS-9	\$27.16	\$35.47
GS-10	\$29.91	\$39.06
GS-11	\$32.86	\$42.91
GS-12	\$39.38	\$51.43
GS-13	\$46.83	\$61.16
GS-14	\$55.34	\$72.27
GS-15	\$65.10	\$85.02
*Includes 30.6% Fringe Benefit Rate		

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